

AN INVESTIGATION OF A SOCIAL-EMOTIONAL COMPETENCY AND  
CULTURALLY RESPONSIVE TEACHING PROFESSIONAL DEVELOPMENT:  
EXAMINING CHANGES IN RELATIONSHIPS, EFFICACY, AND RESILIENCE

by  
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requirements for the degree of Doctor of Education

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## ABSTRACT

This study examines the effectiveness of a professional development intervention in social-emotional competencies and culturally responsive teaching provided to high school English content and special education teachers ( $n = 12$ ) at a suburban Mid-Atlantic high school. The study used a mixed methods design to test changes in participants' perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience. Pre-test and post-test surveys were used to measure variance before and after intervention treatment. Quantitative data were supported by qualitative data including pre-intervention and post-intervention classroom observations, professional development session observations, program materials, and student interviews. While quantitative findings were not statistically significant, convergent qualitative data suggested the teacher participant group members were positively impacted in all three constructs and that the professional development pilot program could be expanded to a larger implementation.

*Keywords:* social-emotional competencies, culturally responsive teaching, professional development

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## DEDICATION

To the educators who have inspired me, collaborated with me, and overcome challenges with me in the greatest lesson of all—social justice.

“All I have is a voice  
To undo the folded lie,  
The romantic lie in the brain  
Of the sensual man-in-the-street  
And the lie of Authority  
Whose buildings grope the sky:  
There is no such thing as the State  
And no one exists alone;  
Hunger allows no choice  
To the citizen or the police;  
We must love one another or die.”

-W.H. Auden, “September 1, 1939”

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## **EXECUTIVE SUMMARY**

This study opened with a review of how existing literature proposes the academic achievement or opportunity gaps as a social phenomenon based in noncognitive or sociocultural factors such as poverty, community violence, and social-emotional trauma. The theoretical foundation of this work proposed that interventions must go beyond curriculum, management, and accountability professional development for educators. A needs assessment demonstrated an absence of professional development opportunities to address these noncognitive or sociocultural factors. A professional development intervention focusing on educator social-emotional competencies and culturally responsive teaching strategies was developed and implemented with two high school English content and special education professional learning communities at a Mid-Atlantic suburban high school.

A discussion of results from the study, consisting of a convergent mixed methods research design of quantitative survey data and qualitative observational, interview, and artifact data, suggested the intervention did increase teacher participant's awareness of three critical constructs towards the noncognitive or sociocultural aspects of the achievement gap: positive student-teacher relationships, student efficacy, and student emotional resilience although statistical significance was not achieved due to sample size limitations.

These findings suggested both a need for social-emotional and culturally responsive professional development for teachers as well as an expansion of the program to more content departments, whole schools, or whole districts. Implementation of this

professional development program would be of minimal cost to a district and could be included in other cultural proficiency or content-based trainings for staff members.

## **CHAPTER ONE**

### **REVIEW OF THE LITERATURE**

The academic achievement or opportunity gaps are considered both a curricular content gap as well as a cultural gap (Ogbu & Davis, 2003). Curricular and cultural gaps connect when curriculum is developed through Euro-centric foci or is taught through a singular method which ignores the diversity of learners (Boykin & Noguera, 2009; Gay, 2010; Hammond, 2014; Ladson-Billings, 1995; Ladson-Billings, 2002). A cultural gap is defined as the separation between minority students and educators on content, assessment, and relationship needs which exists not because of cognitive abilities but because of sociocultural factors (Boykin & Noguera, 2009; Byrnes, 2003; Chambers, Huggins, & Scheurich, 2009). These sociocultural factors include socio-economic status, family structures, or linguistic variance (Farrington et al., 2012; Jensen, 2009; Navarro, Flores, & Worthington, 2007; Nieto, 2013). The cultural gap extends beyond curriculum and pedagogy and impacts minority students in terms of emotional regulation, efficacy, and embracing of school culture (Evans & Fuller-Rowell, 2013; Hammond, 2014; McKown, Gumbiner, Russo, & Lipton, 2009; Ogbu & Davis, 2003; Ogbu & Simons, 1998; Stevens, Olivarez, & Hamman, 2006).

A singular, and culturally inappropriate, method of presenting curricular content results in underperformance on assessments, increased absenteeism, and increased disciplinary consequences for minority students (Boykin & Noguera, 2009; Farrington et al., 2012; Ladson-Billings, 1995; Ladson-Billings, 2002). Culturally inappropriate methods include non-differentiated direct instruction, Euro-centric explanations or examples, and a focus on hierarchical structures instead of empathetic relationship

building (Gay, 2010; Hammond, 2014; Ladson-Billings, 1995; Ladson-Billings, 2002).

When educators place relationship-building, culturally responsive teaching strategies, and multicultural examples as foundational to the classroom environment, the performance of minority students increases due to the development of a communal classroom infrastructure (Gay, 2010; Hammond, 2014; Ladson-Billings, 1995; Ladson-Billings, 2002).

In order to effectively impact the cultural aspects of the achievement or opportunity gaps, educator professional development must be developed which looks beyond curriculum development and standardized testing to address the social, emotional, and cultural needs of students. The shift of attention in educational reform, especially in regards to the role of high stakes testing accountability, alters the purpose of educator professional development. Content preparation for high stakes testing has become a predominant focus of professional development, yet has not demonstrated meaningful impact on the achievement gap (Braun, Chapman, & Vezzu, 2010).

Social-emotional competencies (SEC) are the psychological and social skills teachers need in order to create meaningful relationships with students as well as respond effectively to negative outside social or emotional stimuli (Goleman, 1995; Jennings & Greenberg, 2008). Increasing educator SEC differs from other methods of professional development interventions in that it is less about curriculum changes and more about preparing teachers to address students' social and emotional challenges within an educational or social system (Jennings & Greenberg, 2008). SEC and the partnering output theory of social-emotional learning (SEL) are not a method of increasing academic intelligence, but rather a means for increasing teacher and student resilience in

preparation for increased academic rigor (Jones & Bouffard, 2012). SEC and SEL are pre-emptive intervention strategies which take place in the preliminary stages of the educator-student relationship and is a foundational action to build trust, support, and relationships prior to engagement in curricular content (Jones & Bouffard, 2012).

The connection between increased relationship-building and trust between educators and students is embedded in both SEC or SEL strategies and achievement intervention strategies. The intersection of SEC or SEL and the achievement or opportunity gaps shows deeper noncognitive, sociological, and psychological separations between students and educators (Farrington et al., 2012). This intersection takes into account the noncognitive aspects of the achievement or opportunity gaps such as poverty, cultural unresponsiveness, and social and emotional disassociation between students and educators (Farrington et al., 2012; Hammond, 2014; Jensen, 2009; Malecki & Elliott, 2002).

### **Statement of Problem**

The noncognitive and sociocultural influence on the achievement or opportunity gaps extends beyond curricular and cognitive perspectives and requires interventions which address teachers' competencies in working with the social and emotional needs of students (Chambers & Tahron, 2013; Goleman, Barlow, & Bennett, 2010; McKown et al., 2009). Educational leaders must create and support this level of knowledge in teachers in order to increase the SEC capacity of educators and to transfer this capacity to improved student perceptions of positive student-teacher relationships, efficacy, and emotional resilience. In a current state, this level and focus of educator professional

development is not widespread or as common as content/curriculum, management, or testing accountability professional development.

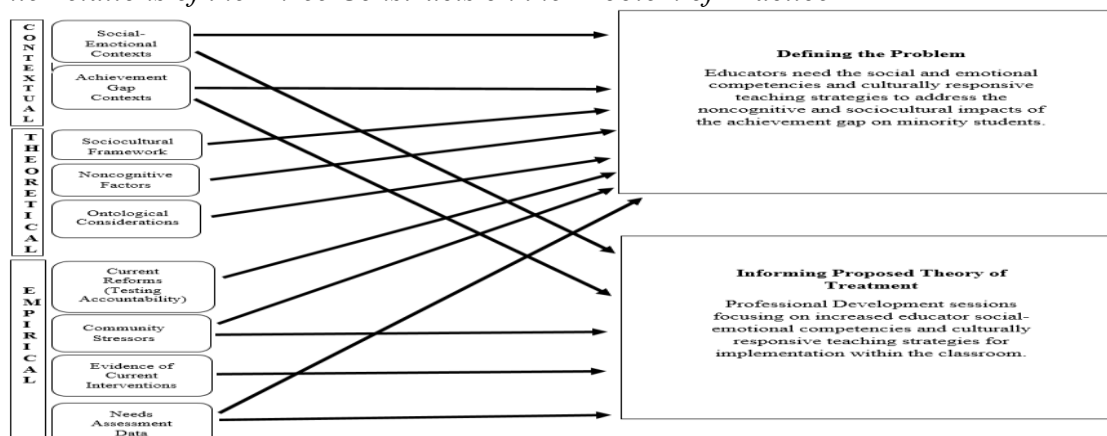
The problem of practice for this study focused on increasing teacher social-emotional competencies and culturally responsive teaching (CRT) strategies to address the noncognitive and sociocultural aspects of the achievement or opportunity gaps which are not addressed through content or assessment reforms. The exploratory professional development intervention included improvements in educators' perceptions of three key constructs: positive student-teacher relationships, efficacy, and emotional resilience.

## Review of Literature

This chapter will discuss the theoretical and contextual constructs of the problem with a focus on developing a theory-based, non-empirical framework to understand the problem and possible interventions. Empirical constructs and existing empirical data focusing on both the existence of the problem and possible interventions will be discussed in chapter two. To visualize the review of literature, Figure 1 below explores the interconnected nature of the contextual, theoretical, and empirical constructs within chapters two and three.

**Figure 1**

### *Interrelations of the Three Constructs on the Problem of Practice*



## **Theoretical Constructs**

The theoretical perspective of the problem propose the achievement or opportunity gaps as an extension of noncognitive factors, such as socio-economics and critical race theory, which combined with cognitive and academic factors to explain variance in performance between social and racial demographic groups. Standardized testing accountability proposes the achievement gap as a strict academic gap that requires a curricular and objective-data driven intervention (Braun et al., 2010; Lee & Reeves, 2012). Despite a decade of study, high stakes accountability has not demonstrated adequate gains because of the noncognitive elements of the gaps (Braun et al., 2010; Lee & Reeves, 2012).

The theoretical construct of this study proposed that noncognitive factors directly impact minority student performance and therefore interventions which address noncognitive gaps such as increases in teacher SEC and CRT are critical to reform. Wentzel's (1993) study of the social impact on student achievement indicates a causality between increased prosocial behaviors, such as positive student-teacher relationships and emotional regulation, and increased academic performance. Studying 423 middle school students, students identified as upholding prosocial behaviors averaged 0.17 on 4.0 cumulative grade point average (GPA) increase, a notable ratio increase within cumulative GPA calculation, as compared to students identifying with antisocial behaviors with a regression average of -0.5 to -0.75 GPA impact (Wentzel, 1993). Furthermore, Wentzel's (1993) study factored in race, socio-economic status, and family status and these noncognitive or sociocultural factors did not produce significant changes



in GPA increase for students identified as upholding prosocial behaviors (Wentzel, 1993).

### **Sociocultural Framework**

The inclusion of noncognitive factors as critical factors within the existence of achievement or opportunity gaps is in opposition to Skinner's operant conditioning theory (Hinton & Iverson, 2012; Skinner, 1938). Operant conditioning is dependent upon the extinction of negative behaviors either through positive or negative reinforcement (Hinton & Iverson, 2012). However, Farrington et al. (2012) and Jensen (2009) both identify noncognitive and sociocultural issues, such as poverty or racial discrimination, as existential conditions acting upon an individual and yet beyond the control of the individual. Therefore, psychological extinction of the negative effects of noncognitive or sociocultural issues cannot be achieved through operant conditioning as the individual is not in control of the stimuli that results in the negative effects.

**Operant Conditioning Influence.** To adequately address noncognitive or sociocultural issues for students, interventions must incorporate a sociocultural perspective of learning. Without empathetic relationships and culturally responsive teaching, educators may promote a level of programmed instruction that upholds an operant conditioning pedagogy and does not address the existential conditions acting upon the student (Carey, 2014; Hammond, 2014).

Operant conditioning does inductively create associations between images and definitions by creating mechanically arranged associations within students, but does not address issues of enthusiasm for learning, cultural variance, or linguistic variance (Piaget, 1973). Operant conditioning also does not account for divisional behaviors or

behaviors that exist outside of established school structures such as distracted behaviors, absenteeism, or delinquency (Ginsburg & Oppen, 1969). Operant conditioning does not address the influence of sociocultural factors such as poverty or racial discrimination on intellectual development (Ginsburg & Oppen, 1969). When examining the nature of the achievement or opportunity gaps as social, emotional, or cultural phenomena, accepting learning as an operant activity is both a logical fallacy and detrimental to creating classrooms of shared inquiry, discourse, and social and emotionally responsiveness. Learning as an operant activity positions classroom hierarchical structures within a dominant discourse of direct instruction and minimal regard for multimodalities of learning or the noncognitive, sociocultural experiences of learners within the classroom.

**Vygotsky and Societal Impacts on Learning.** A Vygotskyian sociocultural perspective positions learning as a combined internal and external act dependent upon both the independent actions of the learner and the dependent actions of others such as teachers, parents, or larger societal factors (Vygotsky, 1978). Societal factors impact intellectual development, engagement within the educational process and culture, and ontological disassociation from an educational culture viewed as either apathetic or abusive to the needs of students (Rosenfeld, 1971; Spindler, 1967).

Rosenfeld's (1971) influential ethnography of an inner city school in Harlem provides a detailed anthropological case study of the psychological, academic, and engagement effects of negative student-teacher interactions. Rosenfeld (1971) documents a school culture built on divisive actions by both teachers and students and connections between negative school interactions, both between students and teachers as well as students and the school culture, and increased numbers of dropouts. Rosenfeld's (1971)

recommendations of increased cultural responsiveness training, focus on positive student-teacher relationships, and recognition of the academic effects of noncognitive and sociocultural issues form a theoretical base for many contemporary studies of the achievement or opportunity gaps.

**Sociological Impact.** An inability by educators and school communities to acknowledge differences in social, emotional, and cultural ontologies connects to increased ostracism and lowered self-image of students (Goffman, 1963). Emotional and cultural apathy or rejection contributes to cultural divisions that directly lower engagement and increase withdrawal and counterproductive behaviors (Storti, 2001). By creating school cultures that reject the social, emotional, and cultural realities of students, schools are ignoring the intellectual development and higher order thinking needs of students and driving students to lowered performance and increased rejection or withdrawal from the school community.

### **Noncognitive Factors and Learning**

Connecting the impact of social, emotional, and cultural factors with learning and neuroeducation is critical to demonstrating the need for teacher SEC and CRT interventions. Lieberman (2014) presents neuroscience research that demonstrates the fundamental need for emotional intelligence (EI) and a SEC framework within the cognitive learning process. Lieberman argues that emotional confirmation and social engagement are important to creating effective synaptic connections for both information recall and critical thinking skills. As evidence, Lieberman uses the research of Rilling et al. (2002) to explain the neurological connections between social support and cognitive functioning. Using fMRI studies of 36 college undergraduate brain patterns, Rilling et al.

(2002) examines the students' synaptic connections when asked to rank opinions on controversial topics such as school prayer. During the study, Rilling et al. (2002) gathered initial data of the students' ideas alone but then gathered additional data of the student's interactions with other students who were either in agreement or disagreement with her or his own opinion. Rilling et al.'s (2002) final conclusions demonstrate that students speaking about controversial topics formed greater synaptic connections and understanding of the topic when social-emotional factors, such as emotional confirmation or empathy, when speaking with a student with either the same or a differing viewpoint. Lieberman's and Rilling et al.'s (2002) theories frame EI and SEC as fundamental skills no different from language acquisition or modalities of intelligence which are required for increased synaptic connections especially when asking students to engage in higher order or critical thinking activities.

**Neuroeducation and Emotion.** Addressing the emotional climate of a classroom is a part of neurologically sound lesson planning (Hardiman, 2012). Two perspectives on the brain's interactions with emotions are important to demonstrating a need for teacher SEC and CRT interventions: the effective learning of social and emotional behaviors and the impact and conflicts between emotional stressors and learning. These two aspects of brain functionality demonstrate a causal relationship between emotion and learning (Ferry, Roozendaal & McGaugh, 1999).

Recognition and processing of emotion involves multiple areas of the brain including the limbic system and the amygdala (Gazzaniga, Ivry, & Mangun, 2009). Emotional associations, both positive and negative, interact with the functioning of the limbic system and can increase or decrease future emotional perception (Phelps, 2006;

Phelps & LeDoux, 2005). Negative emotional associations increase the production of emotional reactions to fear, anger, or stress within the amygdala that leads to increased extreme emotional reactions which limit the brain's ability to remember events and information beyond the emotional stimuli (Gazzaniga et al., 2009).

**Neuroeducation and Cultural Responsiveness.** Cultural responsiveness also includes neurological considerations and the negative impact of culturally unresponsive classrooms on the ability of students to effectively engage in learning materials (Hammond, 2014). Hammond (2014) identifies three stages of information processing: (1) input, (2) elaboration, and (3) application. In the context of cultural responsiveness, Hammond focuses on the input stage of information processing and connection between oral tradition, communal or discourse-based learning, and empathy at increasing neural retention of new materials for students.

Minimal cultural engagement within a classroom has social and emotional implications including a lack of trust between the student and the teacher and unbalanced risk and threat assessment by the student within the classroom (Hammond, 2014). The social and emotional reactions to a lack of trust and over self-protection increases the release of cortisol and adrenaline which shrinks working memory which impacts a student's ability to learn and engage in higher order thinking skills (Hammond, 2014; Hanson, 2013).

**Noncognitive Factors Impact on the Brain.** While still an area of growing research, Jensen (2009) provides evidence of the neurological implications of poverty, engagement in community stressors such as violence, and other negative noncognitive factors. Jensen (2009) identifies the effects of poverty, and the stressors connected to

poverty such as abuse, unstable family life, and violence, on three neurocognitive functions: (1) medial temporal/memory system, (2) parietal/spatial cognition system, and (3) the occipitotemporal/visual cognition system. Each of these three systems are critical to high academic performance and impact all levels of knowledge from recall to higher order critical thinking (Jensen, 2009). Furthermore, the longer a student is influenced by poverty, the more impact is noted.

Jensen (2009) builds these conclusions off of research conducted by Noble, Norman, and Farah (2005) on the effects of poverty on cognitive functioning. In a study of 60 elementary school students with 30 identified as low-SES, Noble et al. (2005) used tests of adaptive tasks with each connected to the neurocognitive systems identified by Jensen (2009). Noble et al. (2005) identified a difference, as measured in standard deviations, between the two student groups as notable. Of note within the standard deviations between the two groups is differences in language development ( $SD = 1.0$ ), memory ( $SD = 0.7$ ), working memory ( $SD = 0.5$ ), spatial cognitions ( $SD = 0.4$ ), visual cognition ( $SD = 0.4$ ), and cognitive control ( $SD = 0.4$ ). With these data, Noble et al. (2005) and Jensen (2009) argue the existence of poverty's neurological impact on cognitive functions and a link between noncognitive or sociocultural factors and lowered cognitive and academic performance.

Students experiencing negative noncognitive factors, both inside and outside of the school setting, demonstrate reduced memory retention and critical thinking skills while increasing absenteeism and engagement in risky behaviors such as substance abuse, violence, and dangerous sexual behaviors by middle and high school students (Carrion & Wong, 2012; Gaylord-Harden, Cunningham, & Zelencik, 2011). Engaging educators in

SEC and CRT strategies is needed if educators are to create lessons and assessments informed by neuroeducation and if educators will have the social, emotional, and cultural proficiency to engage with students experiencing substantive noncognitive stressors.

**Perceptual Psychology and Efficacy.** The affordance basis of Gibson's (1966; 1979) perceptual psychology expands psychological and learning development to a system of social affordances and a sense of learner interface with the world. The perceptual psychological model positions learning as a process outside of a base interaction between individual student and teacher and expands to whole models of environment and student interactions and the impact of this environment.

Building upon perceptual psychology, Bandura's (1977; 1995; 1997) development of the theory of self-efficacy, or one's abilities to organize, participate, execute, and reflect upon cognitive tasks and prospective situations, redesigns learning theory to incorporate cognitive abilities and the influence of positive input on desire to performance. The instilling of efficacy expectations modifies behaviors resulting in an increased outcome expectation (Bandura, 1977). Efficacy expectations are divided into four sources: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal (Bandura, 1977). Each of these four sources includes increased social interaction with the learner through concepts such as modeling, performance, suggestion, self-instruction, or exposure. Without a sociocultural response and relationship between teachers and learners, increased efficacy expectations and outcomes are not possible. This sociocultural response and relationship is currently not included within dominant methods of school accountability such as testing and monocultural curriculums.

## **Sociological and Ontological Considerations**

While far more theoretical than the neurological impacts of noncognitive factors on learning, the existence of systemic racism, both inside the classroom and in a larger socio-political context, creates social and ontological separations between students and educators and contributes to the academic achievement or opportunity gaps (Richardson, 2012). Based on case studies of non-Native American teachers assigned to teach in Native American school districts, Richardson (2012) notes that the sociocultural gap between the teachers and students exists beyond changes in pedagogy or teaching method. Teachers in Richardson's case studies are unable to articulate or adapt to the social, cultural, and emotional indicators of their students and therefore any changes or reforms to lesson delivery showed minimal gains.

**Sociological Impact on Relationships.** A discussion of student performance interventions must include deeper socio-political conversations and must be framed effectively within educator professional growth (Boykin & Noguera, 2011). These conversations include understanding the sociological and ontological impact of race on the classroom in terms of increased disconnection between teachers and students, initial mistrust of educational systems and authorities by students, and negative or absent teacher-student relationships (Boykin & Noguera, 2011). These sociological and ontological impacts are pre-curricular and pre-instruction and must be addressed prior to engagement in instruction during the initial stages of teacher-student relationships through empathetic and culturally responsive community building activities (Boykin & Noguera, 2011).



**Power and the Classroom.** Panoptical power structures are a dominant method of the exertion of order and power by society over the individual (Foucault, 1975). Panopticism is a method of control exerted in a closed space with visible surveillance infrastructure to promote a mindset of constant observation within an individual. Within the classroom, a panoptical power structure between the dominant teacher and the subjected student is the historical paradigm (Landahl, 2013). A panoptical power structure reinforces a colonizer to colonized relationship and continued ontological disassociation. When replaced with a synoptical and communal structure, classrooms promote student discourse and positive relationships (Landahl, 2013). Synoptical and communal classroom structures promote increased trust and an alleviation of social stressors caused by cultural separations (Hammond, 2014). Classrooms with shared power structures increase cultural dialogue which increases active discourse and higher order critical thinking activities and negates many of the sociological and ontological separations between students and educators (Shade et al., 1997).

**Cultural Capital and Classroom Fluency.** The theory of cultural capital, or the role of non-tangible culture or aesthetics, is applicable to the study of classroom power dynamics and the promotion of increased teacher SEC and CRT (Bourdieu, 1977; Bourdieu, 1984). The maintaining of a panoptical classroom structure, as well as denial of a cultural responsive curriculum and empathetic student-teacher relationships, serves as an act of denial of shared cultural capital that directly impacts the academic and social-emotional health of students by furthering social, emotional, and cultural divisions between teachers and students (Moore, 2004).

**Racial Construction within the Classroom.** Understanding the role of race and culture on learning styles and relationships and preparing educators for a conversation about race is a key consideration within the context of SEC or CRT (Morris, 2009). When examining the role of teacher SEC and developing professional development which requires educators to examine the effect of individual and group dynamics on performance, an educator's own traditional, social, and progressive views on race must be qualified. A sociological consideration within this typology is the nature of race as a social construct and the individual acceptance of other cultures as culturally valid (Boas, 1940).

### **Contextual Constructs**

The contextual constructs serve three framing purposes for the research: to identify pre-established definitions and research trends in emotional intelligence (EI), social-emotional competencies (SEC), and social-emotional learning (SEL), to identify pre-established definitions and applicable research trends related to the achievement or opportunity gaps, and to identify synthesis with research of these two concepts. While much of the literature in the contextual constructs does provide empirical research and data analysis in both qualitative and quantitative methodologies, the main purpose of the contextual constructs is to create applicable definitions of EI, SEC, and SEL and synthesis with research on the achievement or opportunity gaps.

### **Social and Emotional Contexts**

A discussion of social and emotional contexts includes three areas of theories and research: EI, SEC, and SEL. These three areas begin with progenitive, or initial, theories to current research.

**Progenitive Theories.** The progenitive theory for both SEC and SEL is the theory of emotional intelligence (EI). While similar to SEC or SEL, EI has broader application to the social world and the theory's application extends beyond the classroom into the business, counseling, and psychology fields (Goleman, 1995). Initially based on Gardner's (1983) theories of multiple intelligences, EI was defined by Payne (1985) as a societal by-product of the systemic repression of emotions which creates confusion within emotional articulation. Payne (1985) defines EI as the ability to analyze and react to differentiated emotions and the ability to articulate individual emotions to others.

**Emotional Intelligence in Education.** Salovey and Mayer (1990) provide the predominant definition of EI which is used in educational research. They define EI as the ability to monitor, self-regulate, and appropriately apply emotions with special attention to responding to negative emotional stimuli. According to their work, EI is composed of two key components: expression of emotions and regulation of emotions (Salovey & Mayer, 1990). Within each component are relationships between the emotions in the self and the emotions in others. They conclude that EI is achieved through interpersonal expression and empathetic perception of the emotions of others. Salovey & Mayer (1990) examine previous research using the Communication of Affect Receiving Ability Test (CARAT) (Buck, 1976) to categorize a test subjects' nonverbal perceptions of the emotions of others to find that increased self-awareness of interpersonal emotion connects to increased perceptions of empathy and the emotional regulation needs of others.

**Social Emotional Competencies.** Building on the theory of EI, social-emotional competencies (SEC) are measures of the quality and frequency of prosocial, positive

social and emotional stimuli presented within a classroom (Civic Enterprises, Bridgeland, Bruce, and Hariharan, 2013; Goddard, Hoy, & Woolfolk Hoy, 2004; Jennings & Greenberg, 2008). SEC requires increased EI and predicates increasing positive student social-emotional responses as a strategy for improved classroom climate or academic success (Jennings & Greenberg, 2008). As a critical variable within the problem of practice, increased teacher SEC was the immediate, short term desired outcome of the proposed professional development intervention.

Whereas EI is the psychological skill needed to be aware of emotional input and output, SEC is the practices or routines developed to create pro-social and emotionally empathetic environments (Civic Enterprises et al., 2013; Jennings & Greenberg, 2008). Critical drivers within SEC are student-teacher relationships, social and emotional classroom climate, emotional regulation by both teachers and students, increased student self-efficacy, prosocial classroom management and routines, and effective implementation of student focus social-emotional learning (SEL) opportunities (Jennings & Greenberg, 2008; Zins, Elias, Greenberg, & Weissberg, 2000).

While EI is an important underlining theory, increasing teacher SEC is more directly related to classroom and academic contexts (Zins, Payton, Weissberg, & Unte-O'Brien, 2007). Qualitative and quantitative measures of SEC are also easier to gauge within a school context as they do not require jargon-heavy psychological tests such as those developed by Mayer, Salovey, and Caruso (2002), and can be captured through self-reported survey data (Jennings & Greenberg, 2008; Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009).

SEC are of benefit to both teachers and students within the context of emotional exhaustion and classroom emotional climate (Byrne, 1994; Jennings & Greenberg, 2008). The relationship between increased teacher SEC and increased optimal classroom emotional climate benefits both teachers and students through less emotional rigidity, emotional exhaustion, depersonalization, and recognition of social and emotional stimuli impacting learning (Chan, 2003; Jennings & Greenberg, 2008).

In a study of 3,044 Canadian teachers of all grade levels, Byrne (1994) examined survey data of burnout predictors such as negative attitudes towards students and reduced feelings of efficacy from both students and teachers and the resulting depersonalization and negative emotional climates found in antisocial classrooms. Providing teachers with SEC as coping mechanisms to predictors of burnout increases teachers' own emotional regulation and ability to recognize the social and emotional inputs and outputs of students (Byrne, 1994; Chan, 2006; Jennings & Greenberg, 2008).

Social and emotional theories and strategies, including SEC, are not implemented curricular or pedagogical interventions similar to reading strategies or lesson plan design (Pianta, La Paro, Payne, Cox, & Bradley, 2002). SEC theories and strategies are mediating or routine strategies designed to promote supportive relationships and emotionally fluent classrooms (Chan, 2006; Jennings & Greenberg, 2008). As such, specific SEC strategies are embedded in classroom routines, random social and emotional scenarios and interactions between teachers and students (Jennings & Greenberg, 2008; Pianta et al., 2002).

The critical variable within increased classroom SEC is the teacher and how teachers are both aware of SEC responses and promote SEC and prosocial classrooms

(Birch & Ladd, 1998; Hamre & Pianta, 2001; Jennings & Greenberg, 2008). As such, quantifying the outcomes of SEC professional development is difficult through an objective study of student performance data because of the confounding and mediating nature of social and emotional variables (Jennings & Greenberg, 2008). The impact of increased teacher SEC must be measured through perceptions and climate surveys prior to any analysis student performance variance before and after treatment (Jennings & Greenberg, 2008).

A major study in the effects of teacher education in SEC and SEL conducted for the Center for Academic, Social, and Emotional Learning (CASEL) was Civic Enterprises et al.'s (2013) survey on educator perceptions of SEC and SEL strategies. Civic Enterprises et al.'s (2013) survey on SEC and SEL presents multi-school level and multi-experience data of SEC and SEL perceptions and implementations. Provided to a cross-section of K-12 teachers within districts connected to proposed Race to the Top federal funds, Civic Enterprises et al. (2013) provided surveys to more than 600 teachers that focused on key variables within SEC and SEL including: the importance of SEC/SEL in the classroom, the connection between the impact of poverty and the impact of SEC/SEL supports, and the relationship between improved SEC/SEL and achievement. While descriptive in analysis, data indicated a positive response to all variables connected to SEC/SEL. For example, 76% of teachers surveyed indicated SEC/SEL as critical to promoting positive school experiences. When disaggregated by grade assignment, teacher positive responses at the high school level were lower than elementary and middle school level. Civic Enterprises et al. (2013) hypothesized the lowered recognition by high school teachers as not indicative of lowered sense of value

but lowered involvement in key SEC or SEL concepts through professional development or school improvement plans.

**Social Emotional Learning.** While often discussed as synonymous with SEC, SEL is defined as the process and specific strategies to increase prosocial and positive emotional indicators for students (Elksnin & Elksnin, 2003; Jones & Bouffard, 2012). Within the logical progression of increased development of EI, teachers with a heightened awareness of SEC are better equipped to transfer this knowledge to specific student strategies to increase SEL indicators within the classroom (Jennings & Greenberg, 2008; Zins et al., 2000).

The primary indicators of SEL align with SEC indicators but are focused more on the process of learning and implementing social-emotional strategies or mechanisms rather than knowledge and awareness (Elksnin & Elksnin, 2003; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Zins et al., 2000). These key indicators include positive relationships, emotional regulation, improved efficacy, and emotional resilience (Zins et al., 2000). A key divergence between SEC and SEL is the temporal point at which these indicators are communicated and the implementation of strategies. While SEC indicators are built into pre-service or professional development sessions to increase teacher awareness, SEL indicators are the active product of increased SEC within the classroom and applied to specific teacher actions to increase student SEL indicators (Elksnin & Elksnin, 2003; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Zins et al., 2000).

Using a comparative case study of clinically-referred and non-clinically-referred students, McKown et al. (2009) isolated key skills within SEL such as awareness of non-

verbal emotional cues and interpreting social empathy. McKown et al. (2009) analyzed the results of two studies of clinically referred students aged 5 to 17 and the impact of teachers' integration of the above SEL skills into classroom lessons. In both studies, indicators of increased non-verbal emotional cues and interpreting social empathy increased in mean scores by 0.30 to 0.50 in the experimental group between pretest and posttest data. A secondary conclusion of McKown et al. (2009) was a mediation of the negative impact of race and socio-economics in an individual student's ability to engage in the SEL skills after the application of the lessons. Within the second study, the addition of the race and socio-economic variables did not affect the results within a statistically significant margin. While the subject group of McKown's et al. (2009) studies are clinically referred children and represented outliers in terms of severity of issues, the noncognitive and sociocultural issues of poverty, efficacy, and access impacted the students in the studies the same as many students who will participate in SEL interventions (Farrington et al., 2012).

Goleman, Barlow, and Bennett's (2010) study of SEL application in schools in New Orleans after Hurricane Katrina examined the role of SEL strategies in increasing the emotional health of minority students in low income areas. This study focused on those who were dealing with mediating stressors outside of the school setting such as poverty, violence, or the aftermath of homelessness due to the hurricane. Focusing on an elementary school in East New Orleans, the researchers examined the whole school effects of added SEL interventions including weekly student focus groups where students discussed both topics both impacting the students personally as well as larger, community events. The school also added restorative zones for students dealing with disciplinary



issues instead of zero tolerance suspensions. The researchers focused on the effects of the SEL interventions on suspension and disciplinary rates. The school saw a drop in school disciplinary infractions from 40% to 25% of students. While still higher than the state and national average, these data demonstrated major improvements given the school's historical data trends.

While also evidence of the importance of teacher SEC, Civic Enterprises' et al. (2013) survey of K-12 teachers also indicated the parallel importance of SEL within classrooms. These survey data from Civic Enterprises et al. (2013) presented SEL as aligned with Jones and Bouffard's (2012) definition of the process or product of increased teacher SEC. Civic Enterprises' et al. (2013) survey data also correlated improved SEL infrastructure with specific student academic or behavioral activities such as reducing antisocial behaviors such as bullying (54% positively agree), reduction in classroom distractions (57% positively agree), and improved interest in academic materials (77% positively agree). As with teacher SEC focus, when these data are disaggregated among school levels, levels of agreement dropped at the high school level with further hypothesizing that limited access to high quality SEC or SEL awareness training among high school teachers correlating with the lowered positive output within the survey data.

With the progenitive theories of Salovey and Mayer (1990) and Goleman (1995) as a critical framework, SEL research in the classroom analyzes the effectiveness of SEL on student achievement, mental health, and school culture. An initial work of research and application of SEL in the classroom is Elksnin and Elksnin (2003) who proposed using existing qualitative tests such as the FIG TESPN Routine (Elias, Tobias, &

Friedlander, 1999) to foster increased emotional regulation within secondary students through a hierarchical response system which included defining social and emotional problems, generating solutions, predicting outcomes, and providing alternative solutions. Although not containing new empirical research, Elksnin and Elksnin's (2003) work provides a sample of practical application and strategies within existing SEL strategies within secondary classrooms.

Weissberg, Resnik, Payton, and O'Brien (2003) expand Elksnin and Elksnin's (2003) practical strategies to include three core components of SEL pedagogy: expanded relationships, community connections, and educator professional development.

Weissberg et al. (2003) examined the use of SEL strategies through the Caring School Community program in fifty K-6 schools within the United States which included approximately 5,000 students. The focus of the program included SEL focus groups between students and teachers, student-student mentoring, and social-emotional based parent and community outreach. Data collected during the program indicated a 5% increase among student academic motivation levels for the experimental group comparative to a .01% increase for the control group. Additionally, the experimental group increased at a rate of 10% in improved social motivation levels as compared to a 5% increase for the control group. These data demonstrated positive impacts on academic achievement. However, a limitation of these data was the study did not disaggregate the effects of SEL intervention on minority students.

Hoffman (2009) provided a counterargument to the classroom application of SEL by focusing on the ambiguity in research at isolating and discrediting moderating, societal variables such as family influence within the success of SEL. Hoffman (2009)

contended that the empirical evidence used to identify emotional intelligence and the tenets of SEL, such as the Bar-On test (Bar-On, 1997; Freudenthaler & Neubauer, 2005), were applicable only within a clinical setting and departed from the psychological application when applied as an educational intervention. Taking account Hoffman's criticisms, interventions based in SEL must be properly connected to educational-based research and incorporate existing classroom-based interventions in order to prevent misapplication.

### **Defining the Achievement Gaps and Applicable Research Threads**

Providing theoretical and definitional research threads concerning the achievement or opportunity gaps is important to create synthesis between SEC and achievement gap research. If the gaps is proposed as noncognitive or sociocultural phenomena, a critical proposition rest in explaining the sociological, psychological, cultural, and ontological factors which contribute to the gaps and exist beyond or in concurrence with curricular or content gaps. This section provides contextual and definitional research within the achievement or opportunity gaps to assist in positioning the gaps as an issue extended past curriculum, pedagogy, or learning theory and into areas of sociocultural impacts which require broader social-emotional interventions by teachers.

**Cultural Ecology.** Ogbu and Simons' (1998) cultural ecology theory examines the relationship of cultural influence to minority student achievement. The premise of this theory centers on a division between internal cultural group influence and the influences of the dominant cultural group within the social, emotional, and academic success of minority students. This division creates a social and empathetic gap between minority

students and, predominantly White, educators which contributes to the achievement or opportunity gaps. Ogbu and Simons developed the cultural ecology theory over a period of fifteen years of qualitative, ethnographic observation of mixed race and income high schools in California. By observing the cultural patterns of minority students within a school, in terms of both individual and group dynamics, Ogbu and Simons conclude that two distinct cultures exist within the school: the dominant, Euro-centric culture occupied by staff members and non-minority students and the cultural group occupied predominantly by minority and lower achieving students. Furthermore, limited interactions and cultural crossings occurred between these two groups which created the existences of two separate schools. To counteract the effects of the cultural division, Ogbu and Simons promote improved relationship models and empathetic mentoring to limit the impact of the cultural division and to integrate both cultural groups into one school culture. A highly influential study within studies of the achievement gap, Ogbu and Simons establish the cultural gap between minority students and, predominantly white, educators and the impact of this gap on minority student achievement.

**Stereotype Threat Model.** Another critical theory that explores the achievement or opportunity gaps is Steele's (1997) stereotype threat model. Steele's broad definition of the stereotype threat model is the experiential or situational stress of conforming to racial stereotypes as felt by minority students. Experiential or situational stress in minority students is confounded by the actions of educators and authority figures which confirms the threat model. Within the context of this study, the role of the stereotype threat model as an academic and emotional impact on students is of interest. The stereotype threat is a social-psychology phenomenon in which members of a minority or

outsider group are constantly identified in a negative or threatening domain by members of the dominant group (Spencer, Steele, & Quinn, 1997; Steele & Aronson, 1995). The stereotype threat lowers minority students' academic identification, efficacy, engagement in school culture, and increases disciplinary occurrences by perpetuating increased isolation of minority students from relationships with educators (Steele, 1997). The stereotype threat results in increased anxiety, lower information retention, and decreased emotional regulation and resilience (Steele & Aronson, 1995). To support the stereotype threat model, participants in a mixed race experimental group were asked to complete varying vocabulary words of increasing difficulty (Steele, 1997). When race is factored in, African American participants consistently completed pejorative, experiential, or stereotypical phrases as compared to White participants (Steele, 1997). Like Ogbu and Simons (1998), Steele (1997) proposes increase mentoring programs, improved student-teacher relationships models, and structured student-teacher discourse in order to limit the academic impact of the stereotype threat.

**Curriculum, Teaching, and Learning.** Specific to classroom practices, culturally responsive teaching and curriculum, which includes content and teaching strategies mindful of the learning needs of minority students, negates the effects of negative social and emotional influences for minority students and fosters student-teacher relationships, positive discourse, and improved performance (Carey, 2014; Ladson-Billings, 1995; Ladson-Billings, 2002). Chambers et al.'s (2009) is a qualitative case study of interventions to increase African American participation in Advanced Placement programs at a predominantly White high school and qualitative observation of an Advanced Placement English course with increased minority participation of ten students

in one year. The case study indicates that only one student is successful in the program (Chambers et al., 2009). Through focus group interviews with the first time African American Advanced Placement students and the teacher, Chambers et al. (2009) emphasize the missing roles of peer support, cultural relativity, and positive relationships in the performance of the students.

**School Culture and Engagement.** School culture is a critical element to improved social-emotional perspectives among students through active engagement in the school culture as well as improved student-teacher relationships (Boykin & Noguera, 2009; Farrington et al., 2012; Gregory, Skiba, & Noguera, 2010). Building upon the cultural ecology model (Ogbu & Simons, 1998) and the stereotype threat model (Steele, 1997), Noguera (2003) analyzes school culture and disciplinary trends to identify a correlation between disciplinary infractions being described and treated as legal infractions with more frequency for minority students. Noguera (2003) collected focus and quantitative disciplinary data from approximately 150 students in urban schools in Massachusetts which showed correlations between decreased student-teacher relationships and engagement in school culture and increased serious disciplinary consequences.

**Race and Relationships.** Culturally unresponsive curriculum and teaching, non-empathetic student-teacher relationships, and unequal disciplinary responses are critical elements to the lowered efficacy of many minority students within schools (Fast et al., 2010; Stevens et al., 2006; Williams & Williams, 2010). Reductions in student efficacy and student-teacher relationships lower academic performance for minority students and remove minority students from school and community culture (Byrnes, 2003; Navarro et

al., 2007). Byrnes (2003) analyzes quantitative testing data of twelfth grade students as disaggregated by race to analyze differences in performance. Connecting with student survey data, Byrnes (2003) identified lower efficacy and rejection of positive student-teacher relationships as non-curricular impacts on academic performance. These factors are key to engagement in school culture and result in increased dropout rates and higher levels of absenteeism (Boykin & Noguera, 2009; Byrnes, 2003; Jensen, 2009).

### **Contextual Synthesis**

Social apprehensions of students does impact achievement and are only improved when educators are adequately trained or concerned with support beyond curriculum and instruction (Chambers & McCready, 2011; Chambers & Tahron, 2013; Mowat, 2011). Chambers and McCready's (2011) case study of African American male students and the correlation between involvement in school culture and positive relationships and improved academic success. In one case study, data including grades and testing results for a focus group of seven African American male students were analyzed. For three students identifying positive teacher-relationships, engagement in school activities or clubs, or identifying as having an adult for both academic or non-academic support, achievement either remained static or increased over the senior year. For the four students not identifying these factors, performance declined (Chambers & McCready, 2011).

Similarly, emotional trauma and harm, often initiated by outside community stressors or cultural prejudice, directly impacts the achievement and articulation of students and requires direct, culturally responsive, social and emotional responses by educators to counter negative community and personal stimuli (Nasir & Hand, 2006; Nieto, 2013).

SEC and CRT strategies are designed to increase classroom empathetic relationships and cultural proficiency to counteract the socio-cultural effects of the achievement gap on minority students (Boykin & Noguera, 2009; Hammond, 2014). Without addressing these socio-cultural and noncognitive effects, the achievement gap will persist.

### **Chapter Discussion and Conclusion**

The theoretical framework for this problem of practice was that academic achievement and opportunity gaps are a noncognitive or sociocultural phenomena in addition to academic gaps (Boykin & Noguera, 2009; Carey, 2014; Farrington et al., 2012; Jensen, 2009). By positioning the gaps as noncognitive or sociocultural phenomena, interventions and reforms at closing the gaps must extend beyond standardized testing accountability reforms (Braun et al., 2010; Lee & Reeves, 2012). Interventions focusing on increasing educator knowledge, through professional development, of SEC and CRT will result in positive impacts on the gaps. These positive impacts are the result of increased relationships between educators and students because of educators' new strategies of increasing empathetic classroom climates (Boykin & Noguera, 2009; Carey, 2014; Gay, 2010; Hammond, 2014). Additionally, increases in educator cultural proficiency and cultural pedagogy through culturally responsive teaching will assist at negating the psychological, sociological, and cultural implications of racism within the classroom (Ladson-Billings, 1995; Ladson-Billings, 2002; Richardson, 2012).

A challenge of positioning the academic achievement and opportunity gaps as noncognitive or sociocultural phenomena is the extension of interventions outside of



assessment, curriculum, or pedagogy. As noncognitive or sociocultural phenomena, interventions must include foci on the psychological, sociological, and ontological nature of the gaps. While literature demonstrating the effectiveness of absolute synthesis between SEC and the gaps has not been found, the theoretical frameworks have similarities and include variables such as the nature of student-teacher relationships, student efficacy, and student emotional resilience. As such, increasing teacher SEC can be a short term and intermediate impact treatment at improving these student variables.

In the next chapter, existing empirical evidence of the noncognitive nature of the achievement and opportunity gaps and the impact of increased teacher SEC and student achievement will be explored to provide an empirical rationale for both the existence of the need for increased teacher SEC or CRT skills as a beginning intervention for the noncognitive and sociocultural framing of the gaps. These existing empirical studies will extend the theoretical and contextual constructs of the literature review to begin narrowing to a proposed theory of treatment as discussed in chapters four and five. The next chapter will also provide the first data discussion of both the existence of the problem of limited teacher SEC and CRT professional development within the schools and evidence of teachers' prior knowledge and opinions on the effectiveness of professional development intended to increase teacher SEC.

## **CHAPTER TWO**

### **EMPIRICAL FRAMEWORK AND NEEDS ASSESSMENT**

In chapter one, the contextual and theoretical frameworks were established to provide a more abstract or theoretical phenomenology to the academic achievement and opportunity gaps, social-emotional competencies (SEC), and culturally responsive teaching (CRT). In order to provide a strong foundation for both the existence of the problem and any possible interventions, an empirical framework and a needs assessment are required to establish observable evidence of the problem as well as perceptions of the problem by current educators, feedback on possible solutions to the problem, and current organizational structures to address the problem.

This chapter will continue the literature review from chapter one by closely reviewing existing empirical research regarding the existence of the problem, current status of interventions to the problem, and the role of sociocultural stressors on students. To build towards a proposed intervention, this chapter will examine the empirical evidence of impact of existing SEC or SEL interventions.

Also discussed in this chapter will be a mixed method analysis of current educator survey questionnaire data was used to gain insight on current perspectives on the existence of the problem and proposed treatments proposed as a needs assessment to the problem of practice. This chapter concludes with both quantitative and qualitative examinations of evidence of the existence of the problem of limited SEC and CRT professional development for educators.

## **Empirical Construct Literature Review**

In order to provide logical observations of the existence of the problem of the need for teacher SEC and CRT professional development, the contextual and theoretical constructs discussed in chapter one must be matched with existing empirical studies. An initial area of need was to examine the current impacts of prominent interventions on the academic achievement or opportunity gaps. A primary empirical need to move to new areas for intervention was observable evidence of the achievement or opportunity gaps as noncognitive or sociocultural phenomena. These data were then expanded to provide empirical synthesis between the role of noncognitive or sociocultural facts on the gaps and the role of teacher SEC or student SEL skills. To move towards empirical evidence of increased teacher SEC and CRT as a theory of treatment to address noncognitive or sociocultural impacts of the gaps, existing studies of the current existence, frequency, and effects of existing teacher SEC and CRT were examined.

### **Interventions through Testing Accountability**

The No Child Left Behind Act of 2001 (NCLB) provided for conflicting interventions regarding race, equality of opportunity, and the achievement gap in that it focused school leaders and districts to disaggregate and examine the data variance within racial demographic categories but also created an overreliance on test scores as a singular mean for judging student performance (Boykin & Noguera, 2011; Ravitch, 2010). NCLB predicated a decade of singular focus around test taking skills which did not address the social, cultural, and emotional elements within the achievement or opportunity gaps (Boykin & Noguera, 2011; Meier, 2001).

Culturally responsive activities such as oral presentation, discourse, and higher order thinking skills developed outside of multiple choice examinations were not quantified in measures of student success (Boykin & Noguera, 2011; Gay, 2010; Ravitch; 2010). These gaps in culturally responsive activities and strategies resulted in two outcomes of increased testing accountability as a primary intervention for the achievement or opportunity gaps: a lowering of expectations for passing state mandated tests or data of questionable validity at the true nature of the cognitive gap (Boykin & Noguera, 2011; Ravitch, 2010; Zeleny, 2010).

The existing empirical studies below examine data of the impact of standardized testing reforms on the achievement or opportunity gaps. These studies support a conclusion that NCLB reforms and increased standardized test have not created effective and sustained impacts on the gaps because they do not address the noncognitive or sociocultural factors contributing to the gaps or do not focus on culturally responsive methods of assessment to gain valid and multimodal performance data. NCLB and testing accountability as a gap interventions not only provide minimal to no impact on the gaps but are contributing to the gaps from a noncognitive perspective through decreases in student efficacy and interest correlating with increased absences and gaps in curricular instruction.

**Testing Intervention and the Achievement Gaps.** Critical to the importance of a study of noncognitive or sociocultural factors and impacts on the achievement or opportunity gaps is evidence of the ineffectiveness of high stakes testing accountability at closing the gaps. Braun et al.'s (2010) study of the Massachusetts NAEP mathematics test results provides quantitative evidence of the ineffectiveness of high stakes testing at

impacting the gaps. Comparing statewide testing data from 1998 through 2008, Braun et al. (2010) show minimal gains within minority students despite the disaggregated data goals of NCLB (United States Department of Education, 2001). Lee and Reeves (2012) continue Braun, et al.'s research on the Massachusetts NAEP mathematics test and expand their conclusions through linear modeling to show no difference in minority student test scores before or after the implementation of NCLB. Braun et al. (2010) and Lee and Reeves (2012) provide quantitative evidence of the need for new approaches to closing the gaps outside of high stakes testing accountability.

**Testing Intervention as a Contributor to the Achievement Gaps.** A critical conflict within increased testing accountability and achievement or opportunity gaps interventions is the limitation of creative and independent freedom for teachers to address the multimodal needs of all students (Boykin & Noguera, 2011). Focusing on test taking and single answer response questions contributes to passive learning environments where direct instruction supersedes creative and culturally responsive pedagogy (Boykin & Noguera, 2011, Gay, 2010; Noguera, 2003). While Braun et al. (2010) and Lee and Reeves (2012) indicated minimal to no impact of standardized testing with the Massachusetts NAEP mathematics test, researchers studying urban education and the achievement or opportunity gaps have identified NCLB and increased testing as a contributor to the achievement gaps.

**Testing Accountability and Student Efficacy.** The effects of increased testing accountability on teachers correlates to impacts on the engagement of students and students' feeling of efficacy regarding complex material. Current requirements for standardized testing focus singularly on content recitation and do not expand to

incorporate multi-modalities of learning or culturally responsive preparation or assessment techniques (Boykin & Noguera, 2011, Gay, 2010). In a study synthesizing prominent theories on the achievement gap such as the stereotype threat model and the role of minority student efficacy on reading standardized test performance, Good, Aronson, and Inzlicht (2003) developed a research design of three tiers of predominantly low SES and minority seventh grade students including an academically mentored group, a social-emotional mentored group, and a control group with counterfactual testing preparation conditions. A hypothesis for the social-emotionally mentored group was that if college students provided mentoring not just on reading comprehension but self-efficacy and explorations of multi-modalities of learning then student test scores would rise at or greater than the control group. The results indicated higher means scores for both mentored groups over the control group and typical racial and gender performance gaps persisted for the control group ( $M = 88.26$  for the academic mentored group,  $M = 89.62$  for the SE mentored group, and  $M = 84.38$  for the control group). These data confirm a hypothesis that counterfactual conditions within standardized testing accountability focusing solely on content are not addressing the noncognitive or sociocultural needs for low SES and minority students within the achievement gap.

**Testing Accountability and Student Absenteeism.** A prominent theory within organizing school improvement for high impact schools is developing a system and culture of trust (Bryk, Bender Sebring, Allensworth, Luppescu, & Easton, 2010). This organizational trust is multifaceted and includes trust between school leadership and staff, staff and students, and the school and the community. Divisions within this organizational trust manifests either through decreases in experimentation and innovation

within teaching and learning or apathy and disengagement from school culture (Bryk et al., 2010). A major output of organizational mistrust by students of a school is chronic and high impact absenteeism.

Although completed in the late 1990s, Bryk et al. (2010) provide a major study of the impact of both pedagogical and noncognitive factors on school improvement and, inversely, school failure within Chicago Public Schools. In a study of school attendance, Bryk et al. divided schools into two categories based on pedagogical focus: schools with weak pedagogical application and strong pedagogical application. Weak pedagogical application was defined as limited innovation within teaching and learning and a focus on direct instruction, test preparation, basic skills worksheets, and limited authentic application of materials. Strong pedagogical application was defined as high levels of dynamic instruction, multiple modalities of assessment, and authentic application-based assessments. When compared parallel with attendance rates, the correlation between weak application and high absenteeism is both apparent and clearly defined ( $M = 67$  of students defined as high attendance impact of missing 70% or more of school). Inversely, strong application schools demonstrated clear and apparent lowered rates of chronic absenteeism ( $M = 29$  of student defined as high attendance impact of 70% or higher).

Often ignored in debates over high stakes testing and NCLB, Bryk's et al. (2010) study provides clear and influential field data of the negative impact of direct instruction and test preparation on schools and students with high impact noncognitive or sociocultural challenges. Instead of providing interventions and progress towards closing the achievement or opportunity gaps, testing accountability reforms have either resulted

in stagnation of improvements or, as Bryk et al. (2010) demonstrate, contributed to a widening of the gaps.

### **Community Stressors and Achievement**

Community stressors are defined as issues, concerns, or harm which students are involuntarily or voluntarily engaging in outside of the school such as violence, physical abuse, or substance abuse (Gaylord-Harden et al., 2011). Community stressors extend beyond the classroom and are often found in the periphery community surrounding the school yet contribute greatly to lowered academic performance and increased student absenteeism (Farrington et al., 2012). Community stressors are predominant drivers within the noncognitive or sociocultural aspect of the achievement or opportunity gaps and cannot be addressed through testing accountability reforms or curricular or content changes (Boykin & Noguera, 2011; Farrington et al., 2012). To adequately address the role of community stressors within the gaps requires heighten awareness by teachers of the impact of stressors on students and the SEC skills of teachers to create mitigating classroom environments (Chauhan & Dickson, 2009; Farrington et al., 2012; Zins et al., 2000).

**Evidence of Community Stressors Impact on Achievement.** Although a prominent impact on the achievement or opportunity gaps, the role of community stressors on achievement for low SES and minority students has not be discussed frequently within current national conversations regarding testing accountability. Several prominent studies have provided empirical evidence of direct causality between increased influence of community stressors and lower academic performance with several studies disaggregating results to show a great impact on minority students.



In a longitudinal study of female students involved in the juvenile justice system, Chauhan and Dickson (2009) studied academic indicators for 122 adolescent girls from urban areas. The student subject group was more African American ( $N = 69$ ) than White ( $N = 53$ ) producing an immediate hypothesis that African American females were more impacted by community stressors such as neighborhood violence and disruptive behaviors than White females. The correlations between increased community stressors and lowered academic performance were clearly established through a covariant analysis of engagement within a community stressor and achievement indicators. For example, 0.77 African American respondents indicated witnessing either familial or community violence with a covariant reading achievement score of  $M = 91.28$ . In comparison, 0.75 White respondents indicated witnessing violence with a covariant reading achievement score of  $M = 97.9$ . When studied holistically, the coefficients between neighborhood stressors, deemed anti-social behaviors, and lowered academic performance correlated to an overall increased mean of deemed time at academic risk for all students within the study but with African American participants doubled over the White participants.

**Impact of Community Stressors on Social-Emotional Well Being.** Maring and Koblinsky (2013) use a qualitative study of twenty teachers within high poverty, urban schools to demonstrate disconnection between educator responses to students in crisis due to community stressors. The teachers experience rate was  $M = 3.6$  years and were predominantly African American. Using focus group questioning and operational data from classrooms and staff meetings, the study found a high frequency of reoccurrence of feelings of inadequacy at addressing or apathy to students' community stressors and the impact on academic achievement. These data indicated that community stressors and

ecological impacts were contributing to student performance yet focus group questions indicated limited understanding of the definition and details of these stressors by students' teachers. For example, when asked to articulate the experiences of students in terms of dealing with community violence, no teachers within the focus group could articulate empathetic responses to this question. A conclusion of the study was that professional development, focusing both on teacher and student resilience, could positively impacts the academic and social effects of community stressors but creating empathetic safe spaces for teachers to understand the social and emotional impacts of community stressors on students' willingness to engage in classroom materials.

**Theoretical Synthesis.** The major theoretical assumption of this study is that noncognitive or sociocultural impacts such as community stressors are contributors to the achievement or opportunity gaps which have not been addressed by existing reforms such as increased testing accountability. These data presented in this section provide empirical evidence of the impact of community stressors on academic achievement (Chauhan and Dickson, 2009) and the disconnection between teachers and students in terms of the impact of stressors on achievement (Maring & Koblinsky, 2013). A synthesis of the theoretical and empirical frameworks indicates a need for new interventions which address the social, emotional, and cultural needs of students. The following section will transition from establishing the existence of this theoretical framework to samples of existing literature of evidence of impact for SEC or SEL interventions.

### **Empirical Evidence of SEC and SEL Interventions**

While a full examination of existing literature of the impact of existing SEC or SEL interventions is discussed in chapter three, this section will provide preliminary

existing empirical studies of the impact of SEC or SEL interventions on either student reported perceptions of academic ability or student academic achievement. The purpose behind this initial discussion is position increasing teacher SEC as a viable theory of treatment for addressing the noncognitive or sociocultural impacts on the achievement or opportunity gaps as established within the theoretical framework of this study prior to a discussion of existing interventions or a proposed theory of treatment.

**Evidence of SEC or SEL Interventions and Student Perceptions.** The impact of increased SEC or SEL interventions on student self-reporting of positive academic indicators such as improved relationships, efficacy and self-image, and school climate perceptions are areas of more focus than the direct impact of SEC or SEL on student achievement data. A common theoretical assumption of studies focusing on SEC or SEL interventions is that improving student (or teacher) self-reporting perceptions of positive academic indicators will create future causality between increased positive perceptions and higher academic performance.

McMahon et al. (2011) examined questionnaire data of 130 middle school students within a group identified as at-risk of low academic performance to show the positive impact of SEL strategies such as mentoring and non-curricular discourse regarding family and community life. The study found the most impact on minority students and improved achievement when SEL strategies were used to directly address the social and emotional impact of community stressors such as poverty or community violence. These data indicated a positive increase in improved self-worth and self-image within the at-risk students with a growth of  $M = 0.21$  of students questioned indicating

improved feelings of self-worth and improved confidence to engage in school and academic cultures.

Tobin et al. (2013) used a mixed methods design that included quantitative data of improved teaching strategies correlating to the implementation of SEL strategies such as improved relationship building, mentoring, and a critical focus on student perception of educators and school climate. Focusing on a case study of a team of science teachers at a mixed income school in Queensland, Australia, Tobin et al. (2013) observed variance among the emotional climate of the classrooms and connections between increased emotional climate and improved teaching and learning. Teachers with improved emotional climate, as identified as purposeful strategies to develop teacher-student relationships and increased empathetic listening of student concerns, also demonstrated improved teaching practices such as wait time ( $M = 0.4$  increase), and clearly communicated intervention structures ( $M = 0.3$  increase).

**Evidence of SEC or SEL Interventions and Student Achievement.** The direct impact of SEL on student academic achievement, with attention to the achievement or opportunity gaps, is an area in need of more research within the body of pre-existing SEC and SEL literature. However, initial studies have provided empirical evidence of implementation of SEC or SEL interventions and positive impacts on student achievement.

While focusing solely on elementary schools, Murray, Rabiner, and Carrig (2012) studied the correlation between increased professional development on teacher SEC and reading achievement performance at eleven rural elementary schools. 97 teachers received the SEC professional development with a correlating performance

analysis of these teachers' 1276 students with a matching control group established from other district achievement data within counterfactual conditions. These schools varied greatly in terms of baseline achievement and income levels. The intervention used in the student was the Incredible Years Teacher (IYT) professional development focusing on a five day consecutive day training for teachers in prominent SEC skills such as empathetic responses, classroom emotional fluency, and positive reinforcement disciplinary strategies (Webster-Stratton, Reid, & Hammond, 2001; Webster-Stratton, Reid, & Stoolmiller, 2008).

With a research goal extending beyond teacher or student perception survey data, Murray et al. (2012) proposed a correlation between increased teacher SEC skills and student reading achievement data. Data analysis was done through multilevel modeling to examine the nesting of students and teachers in variables including time of completion and accuracy. Using STAR reading outcomes, student experimental group demonstrated sizable and statistically significant growth between pretest and posttest results. The time variable, as measured in baseline variance, included statistically significant growth ( $B = -119.13, p = .011$ ). When the additional covariate of student income level was introduced, statistically significant baseline variance was also identified ( $p = .011$ ).

While an important limitation of Murray's et al. (2012) student is the implementation of the SEC professional development and study within elementary school, these data provide a level of existing evidence of the academic impact of a teacher SEC professional development treatment. Although not an expected impact of this study, evidence of increased academic performance for students after the implementation of professional development with a goal of increasing teacher SEC

provides strong foundational evidence that the theory of treatment will impact low level and intermediate impacts such as teacher and student SEC perceptions.

### **Needs Assessment Overview**

The conceptual framework behind conducting a needs assessments focuses on understanding the existence and nature of an organizational problem and the probability of success for a proposed treatment (Altschuld & Witkins, 2000; Soriano, 2013). Needs assessments provide for multiple perspectives of the existence and nature of a problem and operationalize the problem into variables for developing an eventual outcome evaluation (Guba & Lincoln, 1981; Soriano, 2013). Without a multifaceted and operationalized needs assessment, a program or theory of treatment may address incorrect or misunderstood drivers or create a programmatic evaluation which asks incorrect research evaluation questions (Rossi, Lipsey, & Freeman, 2004; Soriano, 2013).

For the purpose of this study, the needs assessment was divided into two areas of examination. The first area was a mixed methods analysis of survey questionnaire data gathered from a random sample of current educators. The second area was a descriptive analysis of existing SEC or CRT professional development currently available within the study's organization.

### **Needs Assessment: Teacher Focus Group**

Prior to the development of a theory of treatment, data connected to current perceptions, prior knowledge, and support of the proposed theory of treatment was collected and analyzed to provide both theoretical and empirical evidence that the proposed theory of treatment was the proper and most effective method for prompting organizational change (Soriano, 2013). In the case of this study, measures of teacher

understanding of the impacts of noncognitive or sociocultural factors on achievement and the value of SEC and CRT professional development was collected to contextualize and inform the theory of treatment.

To provide these needs assessment data, questionnaire survey data were collected from a random sample group of 33 current educators. The purpose of the data collection was to provide descriptive, qualitative, and inferential supports to the current status of educator knowledge of the theoretical noncognitive and sociocultural framework, presence of existing professional development models, and suggestions for the development of a professional development intervention. These data were analyzed through a mixed methods design focusing on analysis of quantitative and qualitative responses.

### **Needs Assessment Research Questions**

To guide the mixed methods design, the following research questions were developed:

1. What were current educator perspectives on the noncognitive or sociocultural aspects of the achievement gap as measured through descriptive statistics?
2. What were current educator perspectives on the impact of existing social-emotional competencies and culturally responsive teaching strategies or professional development on the achievement gap as measured through descriptive statistics?
3. What were current educator suggestions and opinions on effective social-emotional competency and culturally responsive teaching strategies as analyzed through qualitative textual analysis?

4. What was the impact of the moderating variable of race on educator perspectives of impact of race and culture on education and the need for interventions which address these noncognitive or sociocultural issues as measured through a one-way ANOVA test?
5. What was the degree to which social-emotional competencies and cultural responsive teaching are being addressed by professional development within a Mid-Atlantic urban-suburban school district as measured through descriptive statistics?

## **Method**

For the needs assessment, an explanatory mixed methods design was used to gather probabilistic evidence of the existence of the problem of practice and current educator opinions on SEC and CRT. An explanatory design positions quantitative data sequential first within the design with the addition of qualitative coding to further explain empirical conclusions (Criswell & Plano Clark, 2011). Both quantitative and qualitative data were collected through survey questionnaire responses.

**Survey Design and Process.** The survey questionnaire was provided electronically to a randomized group of current educators. The survey contained ten questions ranked on a Likert five point scale with a five rating equaling strongly agree and a one rating equaling strongly disagree. The survey questionnaire also included two free response questions. A discussion of the survey question design, sampling and distribution process, and participants follows in this section. The survey questionnaire is included as Appendix A.



To support the validity of the instrument, the survey questionnaire was a synthesis of two existing surveys. To capture data regarding SEC and SEL, questions from Civic Enterprises et al.'s (2013) survey of educator knowledge and awareness of SEC and SEL indicators were adapted and synthesized into the first five questions of the survey. To capture data regarding CRT, adapted questions from Siwatu's (2006) Culturally Responsive Teaching Self-Efficacy Scales (CRTSE) were used and synthesized into the final five questions of the survey.

To gather respondents to the survey, a probabilistic sampling method was used to gather anonymous respondents. The survey was created electronically with GoogleForms and was sent out on several social media websites as well as a snowball method to gain participants through E-mail contacts. A further discussion of the limitations of this probabilistic sampling method are discussed later in this chapter.

**Participants.** Participants were gathered through an anonymous probabilistic sampling group through completion of an online survey. To qualify participants, demographic questions were included. These demographic questions included type of educational position, level of school assignment, type of school, years of experience, and race. Because the survey was answered through an anonymous probabilistic sampling technique, the qualifying question regarding type of educational position was used to assume respondents currently are employed within an educational system. Online consent with the research was also obtained electronically on the first page of the online survey.

Thirty-three participants responded to the survey. Respondents self-identified as classroom-based teachers ( $N = 26$ ), supporting services such as instructional assistants or

para-educators ( $N = 3$ ), counselors ( $N = 2$ ), school or district-based administrator ( $N = 1$ ), and other ( $N = 1$ ). Respondents self-identified type of school as public school ( $N = 28$ ), charter school ( $N = 3$ ), and private school ( $N = 1$ ). Respondents self-identified level of current school of employment as secondary school ( $N = 28$ ), elementary school ( $N = 4$ ), and alternative or other school ( $N = 1$ ). Years of experience were divided into year ranges with 0-1 years ( $N = 2$ ), 2-5 years ( $N = 9$ ), 6-10 years ( $N = 5$ ), 11-19 years ( $N = 10$ ), and 20 or more years ( $N = 7$ ). Gender was self-reported as female ( $N = 21$ ) and male ( $N = 12$ ). Respondents self-identified race or ethnicity as African American ( $N = 5$ ), Asian American ( $N = 2$ ), two or more races ( $N = 1$ ), and White ( $N = 25$ ).

## Results

Results for the survey questionnaire were divided into descriptive results and inferential analysis of the impact of the moderating variable of race on responses.

Descriptions and discussions of results, are included below.

**Descriptive Statistics.** Descriptive statistical data are reported as  $M$  and  $SD$  for each question within the survey. Results are found in Table 1, 2, 3, and 4.

Table 1

### *Overview of Descriptive Statistics of Responses for the Needs Assessments*

Question	$M$	$SD$
Q1: SE impacts on achievement	4.87	0.32
Q2: Current focus on SEC	2.09	1.16
Q3: Gap indicators as SE issues	4.6	0.54
Q4: Community stressors and academic performance	5	0
Q5: Sociocultural indicators and academic performance	4.66	0.47
Q6: Relationships and trust in academic performance	4.84	0.35
Q7: Differences in culture and academic performance	4.09	0.99
Q8: Classroom instruction and SE/cultural needs of students	4.66	0.63
Q9: Current focus on CRT	2.45	1.3
Q10: Teachers need for SEC and CRT strategies.	4.72	0.44

Table 2

*Descriptive Statistics of Responses by School Level for the Needs Assessment*

Question	<i>M</i> by School Level		
	Elementary ( <i>N</i> = 4)	Middle School ( <i>N</i> = 15)	High School ( <i>N</i> = 13)
Q1: SE impacts on achievement	4.75	5	4.76
Q2: Current focus on SEC	2	1.8	2.23
Q3: Gap indicators as SE issues	4.5	4.86	4.38
Q4: Community stressors and academic performance	5	5	5
Q5: Sociocultural indicators and academic performance	4.5	4.93	4.38
Q6: Relationships and trust in academic performance	5	4.93	4.69
Q7: Differences in culture and academic performance	4	4.53	3.53
Q8: Classroom instruction and SE/cultural needs of students	5	4.73	4.46
Q9: Current focus on CRT	2.25	1.86	3
Q10: Teachers need for SEC and CRT strategies.	4.75	4.8	4.69

Table 3

*Descriptive Statistics of Responses by Age Range for the Needs Assessment*

Question	<i>M</i> by Age Range			
	21-30 ( <i>N</i> = 12)	31-40 ( <i>N</i> = 11)	41-54 ( <i>N</i> = 8)	55+ ( <i>N</i> = 2)
Q1: SE impacts on achievement	4.83	4.9	5	4.5
Q2: Current focus on SEC	2.66	1.63	2	1.5
Q3: Gap indicators as SE issues	4.41	4.72	4.75	4.5
Q4: Community stressors and academic performance	5	5	5	5
Q5: Sociocultural indicators and academic performance	4.58	4.81	4.62	4.5
Q6: Relationships and trust in academic performance	4.91	4.9	4.75	4.5
Q7: Differences in culture and academic performance	4.16	4.36	3.75	3.5
Q8: Classroom instruction and SE/cultural needs of students	4.66	4.81	4.5	4.5
Q9: Current focus on CRT	2.83	1.54	3.25	2
Q10: Teachers need for SEC and CRT strategies.	4.58	4.81	4.87	4.5

Table 4

*Descriptive Statistics of Responses by Gender and Race Range for the Needs Assessment*

Question	<i>M</i> by Gender and Race					
	Female ( <i>N</i> = 21)	Male ( <i>N</i> = 12)	Asian ( <i>N</i> = 2)	Black ( <i>N</i> = 5)	Multiracial ( <i>N</i> = 1)	White ( <i>N</i> = 25)
Q1: SE impacts on achievement	4.9	4.83	5	5	5	4.84
Q2: Current focus on SEC	1.71	2.75	1.5	1.8	1	2.24
Q3: Gap indicators as SE issues	4.71	4.41	5	4.8	5	4.52
Q4: Community stressors and academic performance	5	5	5	5	5	5
Q5: Sociocultural indicators and academic performance	4.71	4.58	5	5	5	4.56
Q6: Relationships and trust in academic performance	4.9	4.75	5	5	5	4.8
Q7: Differences in culture and academic performance	4.14	4	5	5	5	3.8
Q8: Classroom instruction and SE or cultural needs of students	4.81	4.41	4.5	5	5	4.6
Q9: Current focus on CRT	1.85	3.5	1.5	1.8	1	2.72
Q10: Teachers need for SEC and CRT strategies.	4.8	4.58	5	4.8	5	4.68

**Qualitative Results.** Qualitative results were gathered through two free response prompts at the conclusion of the survey questionnaire. The free response prompts were optional. The prompts were written by the researcher with comparable language to the surveys of Civic Enterprises et al. (2013) and Siwatu's (2006). To maintain respondent

confidentiality, the below coding and thematic identifiers were done by the researcher through approximation summaries of respondent's answers.

The coding and analysis of these qualitative data are from a phenomenological method. Holstein and Gubrium (1994) identify phenomenological coding as the process of identifying categories and paradigms to from individualized language particulars. Phenomenological coding is intended to capture commonalities in language as probabilistic representations of experience (Goulding, 2003; Holstein & Gubrium, 1994). An assumption of these qualitative data was that these opinions were produced by current educators existing in a hypothesized counterfactual condition where noncognitive and sociocultural impacts on the achievement gap are apparent and minimal professional development guided by principles within SEC and CRT are used to address these impacts. Therefore, the coded categories and paradigms below represented an approximation of respondent's experiences and opinions on a possible treatment intervention.

Table 5

*Qualitative Feedback on Social-Emotional Competencies for the Needs Assessment*

Statement	Frequency	General Structure	Central Theme	Application
Research is important.	Two	Declarative	Respondents find value in social-emotional research.	Support of proposed intervention.
Outside stressors (hunger and abuse) impact education.	Two	Anecdotal	Respondent confirms impact of noncognitive or sociocultural stressors.	Supports contextual and theoretical framework of intervention.
Unclear on SEC and professional development	Two	Interrogative Declarative	Respondents are unclear on what SEC is and what PD would look like.	Informs intervention design needs.
PD must be tailored for individual teacher and school needs.	Two	Opinion	Respondent recognizes that SEC PD must be aware of school, team, and individual teacher needs.	Informs intervention design needs.

Table 5

*Qualitative Feedback on Social-Emotional Competencies for the Needs Assessment (cont.)*

Statement	Frequency	General Structure	Central Theme	Application
Testing accountability and content coverage does not meet student needs.	One	Opinion.	Respondent confirms current reforms do not address student needs.	Support of proposed intervention.
Divisions in SEC awareness between high and low income schools	One	Anecdotal	Respondent recognizes SEC implementation differs based on her/his experiences in a low and high income school with low income school placing a greater importance.	Informs intervention design in terms of implementation at a mixed income school.

Table adapted from Laurence, C. O., Williamson V., Sumner K. E., Fleming J. (2010). "Latte rural: The tangible and intangible factors important in the choice of a rural practice by recent GP graduates". Retrieved from <http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=1316>

Table 6

*Qualitative Feedback on Culturally Responsive Teaching for the Needs Assessment*

Statement	Frequency	General Structure	Central Theme	Application
Questions and topics of race can cause discomfort with participants.	Three	Declarative Interrogative Opinion Hypothesis	Respondents either ask for clarifying information or are cautious at how issues of race will be discussed within the context of the intervention or how challenging topics regarding race and relationships will be handled within the intervention.	Informs delivery, design, and tone of the proposed intervention. Mandates sensitivity and informed approaches to conversations regarding race and culture. Prompts additional research question regarding variance within racial demographics.
Research is important.	Two	Declarative	Respondents find value in culturally responsive research.	Support of proposed intervention.
Questions regarding the difference in responses due to race of respondent.	Two	Interrogative Opinion Hypothesis	Respondents are curious regarding the role of race of the educator and opinions on the survey or engagement in possible intervention.	Informs delivery and design of proposed intervention. Prompts additional research question regarding variance within racial demographics.

Table 6

*Qualitative Feedback on Culturally Responsive Teaching for the Needs Assessment (cont.)*

Statement	Frequency	General Structure	Central Theme	Application
Unclear on the topic of CRT	Two	Interrogative Declarative	Respondents are unclear what CRT is or are asking for more clarity in the topic.	Informs delivery and design of the proposed intervention. CRT must be clearly defined with applicable strategies.
School and community relationships are important to study	One	Declarative	Respondent affirms that the intersection of school and community are valid areas for research.	Support of proposed intervention

Table adapted from Laurence, C. O., Williamson V., Sumner K. E., Fleming J. (2010). "Latte rural: The tangible and intangible factors important in the choice of a rural practice by recent GP graduates". Retrieved from <http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=1316>

**Inferential Statistics.** Within the descriptive and qualitative measures, questions regarding the variance within the racial demographics of respondents exist. To analyze data regarding the introduction of the moderating variable of race of respondent, an one-way randomized ANOVA test was used to identify variance among three racial groups: Black or African American ( $N = 5$ ), White ( $N = 25$ ), and Other (Asian American and Two or more races;  $N = 3$ ). For the inferential test, the  $H_o$  = racial identity will not produce significant variance in responses and  $H_a$  = race will have significant variance in responses. The threshold for significance for the ANOVA test is a standard  $F_{crit}(2,15) = 3.68$  at  $\alpha = 0.05$ . To perform the ANOVA test, question seven from the survey questionnaire was used due to the question's wording and assumptions being the most focus on the role of race within relationships with educators as identified through qualitative comments.

Table 7

*Needs Assessment Survey ANOVA Test Results*

	<b>Descriptives</b>							
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Std. Error</i>	95% Confidence Interval for Mean		<i>Min</i>	<i>Max</i>
					<i>Lower Bound</i>	<i>Upper Bound</i>		
White	25	3.8000	1.00000	.20000	3.3872	4.2128	1.00	5.00
Black	5	5.0000	.00000	.00000	5.0000	5.0000	5.00	5.00
Other	3	5.0000	.00000	.00000	5.0000	5.0000	5.00	5.00
Total	33	4.0909	1.01130	.17604	3.7323	4.4495	1.00	5.00

<b>ANOVA</b>					
	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Between Groups	8.727	2	4.364	5.455	.010
Within Groups	24.000	30	.800		
Total	32.727	32			

$$F_{\text{crit}}(2,15) = 3.68; P \leq 0.05$$

**Discussion of Results**

The descriptive, qualitative, and inferential statistical data were discussed in this section with a goal of addressing the needs assessment research questions as well as identify synthesis among the three data sources. Each data source was discussed individually with additional transitions and synthesis towards the other sources.

**Impact of Race on Responses.** With a potential intervention involving complex issues of race and culture, attention was paid to both respondents' racial or cultural identification and specific coding of race within narrative answers. As interventions based in race and culture often involve complex and difficult conversations, an important aspect of the needs assessment was to gauge how respondents engaged either through a racial or cultural lens or specific concerns regarding race and culture within the context of an intervention.



For the survey responses, the race or cultural identification of the respondent impacted uniformity within response mean. For example, question seven asked if differences in culture impact academic performance. Respondents who identified as Asian, Black, or Multiracial positively affirmed this statement with a uniform M of 5. Respondents who identified as White responded with more variance ( $M= 3.8$ ) indicating that a differences in the sense of importance of the nature of race and culture as academic impactors already existed within the population sample. These descriptives indicated a need for further inferential testing of the statistical significance of race and culture in respondents and was analyzed through the ANOVA testing below.

Within the narrative responses, three direct references to issues of race causing discomfort or challenges were noted. These respondents noted that discussions of race and culture within the context of professional development or collaboration can cause challenges to acceptance of the professional development or collaboration and must be taken with care by the designer. As with the differences in descriptives for the survey responses, these narrative responses further prompted inferential testing of the significance of race or culture within the responses.

**Descriptive Statistics Discussion.** The descriptive statistical results, as reported as means within a five point Likert scale, addressed the first and second needs assessment research question regarding educator perspectives on the effects of noncognitive or sociocultural aspects of the achievement gap and educator perspectives on SEC and CRT. Disaggregation of data by moderating variables of school level, age, gender, and race also provide discussion on perceptives on SEC and CRT and informed both qualitative and inferential data within the needs assessment.

Survey respondents identified the social-emotional impacts and noncognitive or sociocultural impacts on student achievement affirmatively. Respondents identified social-emotional ( $M = 4.87$ ) and sociocultural impacts ( $M = 4.66$ ) as both existing and relevant topics regarding student performance. Likewise, respondents identified community stressors ( $M = 5$ ) as impacts on performance. In regards to the first research question regarding the impact of noncognitive or sociocultural impacts on the achievement gap, these data affirmed the existence and importance of these indicators as valid within the perspectives of current educators. These data aligned with the theoretical frameworks for this study and further support the empirical constructs discussed within this chapter (Farrington et al., 2012; Gaylord-Harden et al., 2011; Jensen, 2009; Maring & Koblinsky, 2013).

While descriptive data indicates current educators perceive the impact and importance of noncognitive or sociocultural impacts, respondents did not affirm existing methods, interventions, or programs to address these needs. In regards to the second needs assessment research question, respondents indicated limited existence of SEC ( $M = 2.09$ ) and CRT ( $M = 2.45$ ) programs, interventions, or professional development. Based on these data, the current status of educator perspectives on SEC and CRT was that these topics are important but educators are being offered limited opportunities for professional growth in the topics. These data provided additional rationale and support for the implementation of a professional development intervention including SEC and CRT strategies.

Disaggregation of data by moderating variables did not alter the conclusion of the research questions but did inform the implementation and tone of proposed interventions.

While variables of school level and age did not vary with aggregate data, gender and racial disaggregation did present areas for future questioning through qualitative and inferential analysis. Black or African American ( $M = 1.8$ ) and Asian ( $M = 1.5$ ) respondents indicated lower identification of SEC and CRT practices within current schools than White respondents ( $M = 2.24$ ;  $2.72$ ). These data indicated either an environmental or organizational difference between respondents or over assumption of SEC and CRT practices by White respondents. Additionally, perceptions on the role of race and culture with building relationships and classroom support differed between racial demographic groups with Black or African American and Asian respondents ( $M = 5$ ) identifying a disconnection at a greater and unified rating ( $M = 5$ ) than White respondents ( $M = 3.8$ ). These data were explored more in-depth in the qualitative and inferential sources but did indicate a need for careful and deliberate planning of any professional development materials and delivery of materials in regards to challenging materials concerning race and culture.

**Qualitative Results Discussion.** While descriptive statistical results informed the existence of the problem of noncognitive or sociocultural factors within the achievement gap and the need for SEC and CRT professional development, qualitative data better informed the process, rationale, and suggestions for how a professional development intervention should be implemented.

In discussions of SEC, respondents identified the research and interventions as important and provide further support for the existence of noncognitive or sociocultural factors with academic achievement. Additionally, respondents confirmed that testing accountability has not met student needs as discussed in the empirical constructs of this

chapter (Braun et al., 2010; Lee & Reeves, 2012). In regards to a professional development intervention, respondents identified a limited knowledge of the subject and how SEC professional development is organized. An additional focus on the need for differentiated professional development based on school or teacher needs was also identified.

In discussions of CRT, respondents focused on the difficulties and challenges of discussions around race but also indicated an importance within the topic. Respondents identified that CRT professional development must be handled with sensitivity to participants and is a required aspect of any professional development intervention. Similar to SEC professional development, respondents identified a limited knowledge of the subject and how the professional development will be organized. An additional question raised by the respondents was the level of variance in responses due to the respondent's race. With the differences identified with descriptive sources, this additional question prompted the inferential statistical test discussed in the following section.

In regards to the qualitative research question, respondents identified that SEC and CRT professional development is important but must clear and differentiated by need. Additionally, respondents' opinions on the challenges of discussing racial topics within the context of professional development inform an area of additional study as well as the need for sensitivity and awareness during a professional development intervention.

**Inferential Statistics Discussion.** With a significance threshold of  $F_{crit}(2,15) = 3.68$  at  $\alpha = 0.05$ , the ANOVA test supports the existence of significant variance between the moderating variable of race. With a between group  $F = 5.455$  and  $P = .01$ , the

variance between the groups was statistical significant. Therefore, the  $H_o$  was rejected and the  $H_a$  of race having a significant variance in responses was supported.

In regards to the inferential research question, the support of the  $H_a$  indicates that race was a moderating variable on responses. The existence of this moderating variable informs the design of a professional development intervention in the method and process for introducing racially sensitive topics to respondents of multiple racial or cultural identities. These data also indicate a variance in the belief that race and culture are important variables of success within the classroom. In order for a professional development intervention to be effective, the intervention must be designed to negate misperceptions of the role of race and culture within the classroom and encourage participants of all races to engage in meaningful conversations and strategies regarding the noncognitive and sociocultural impacts on the achievement gap.

### **Limitation of Data**

A limitation of these data was sample size especially in regards to disaggregated sample sizes. Respondents to the survey equaled to 75.7% White, 15.1% (Black or African American), 6% Asian American, and 3% Two or more races. No Hispanic respondent data were gathered by this study. In comparison to national educational statistics, the racial demographic composition within United States public schools is 83% White, 6.2% Black or African American, 6.8% Hispanic, 2% Asian American, and 1.2% Two or more races (U.S. Department of Education, 2014). While comparable to a racially aligned sample population, the absence of Hispanic respondents and the larger Black or African American respondent size than national averages was noted within the context of data analysis.

### **Needs Assessment: Existing Professional Development**

An important aspect of a needs assessment was to identify the current existence of treatment, the frequency of treatment, or the fidelity of treatment (Soriano, 2013). In terms of teacher SEC and CRT professional development, measures included the existence, frequency, and application of teacher SEC or SEL and CRT professional development within the intervention organization. These measures determined the intensity, levels, and content for the theory of treatment. If high frequency and application was found, the intervention treatment and dosage would have complied with existing organizational structures. As low frequency and application was found, the intervention treatment and dosage was based in outside research and contain more fundamental and framework exercises in developing teacher SEC. As discussed in this section of the needs assessment, the current availability of explicit teacher SEC or student SEL professional development was low and these data informed the content and structures of the intervention and theory of treatment.

**Organizational Context.** The organizational content for this study was a Mid-Atlantic urban-suburban school district. With a current student population of 141,777, the Mid-Atlantic district was the largest school district in its state and represent a diverse community in terms of race, socio-economics, linguistic variance, and geography.

**Strategic Planning Framework.** The district was guided by a strategic planning framework which informs the district's mission in terms of pedagogy, curriculum development, and leadership. The framework contains goals around academic rigor, problem solving, and social-emotional learning. The overarching goal of the framework was to develop core components of a district-wide educational plan as a method for

impacting and closing the achievement gap. Because the framework directly addresses SEL competencies for both educators and students, a need exists to develop high quality SEC and SEL professional development if the framework was to be properly implemented.

**SEL Core Competencies.** Within the strategic planning framework initiatives was the SEL core competencies. These core competencies were divided into two audiences: students and educators. The district SEL framework aligned with the work of prominent SEL researchers discussed in chapters one and this chapter of this study with a focus on promoting both student and educator resilience, perseverance, self-awareness, and growth mindset. With these SEL core competencies established in the framework, the Mid-Atlantic district provided the political and organizational importance of professional development around increasing teacher SEC.

**Method.** To measure the current availability and type of professional development available to educators in the Mid-Atlantic school district, six categories of professional development were operationalized in analysis of these data. These categories included: (1) social-emotional learning specific professional development, (2) achievement gap and culturally responsive professional development, (3) curriculum and pedagogy professional development, (4) testing preparation, (5) leadership development, and (6) management and operations professional development.

**Online Professional Development Catalogue Context.** Data for these six categories of professional development within the Mid-Atlantic school district were collected from the online professional development catalogue. The professional development catalogue was a digital search engine available to all district employees and

allows employees to sign up for professional development courses to be taken either during the school day through professional development leave or on an employee's own time with possible stipends or course credit. Courses within PDO varied from district-mandated courses to voluntary courses for professional growth or re-certification. These data were then analyzed for frequency percentages. Results of the analysis are included below as Table 8.

**Participants.** Because this part of the needs assessment analyzed the availability of professional development courses or opportunities, there were no human participants in this part of the needs assessment.

**Findings.** Data to establish the current levels of availability of SEL professional development within the district were taken from online professional development catalogue. Frequency for each professional development category were captured by total number and percentage. These data were collected from the district online professional development catalogue as of May 15, 2016. Course offerings change on a rotating basis. These data are dynamic and represent only snapshot data.

Table 8

<i>Professional Development Availability by Type</i>			
	Content	<i>N</i>	Percentage
All Courses		187	100
Social-Emotional Learning Specific PD		2	1
Achievement Gaps and Cultural Responsive PD		13	6
Curriculum and Pedagogy PD		82	43
Test Preparation PD		1	>1
Leadership PD		22	11
Management and Operations PD		67	35



**Discussion of Results.** Being one of the three foci of strategic planning frameworks for the Mid-Atlantic district, a need for explicit professional development in SEC and SEL for educators was critical for successful implementation. These data showed a one percent focus on explicit SEC or SEL professional development currently available to district staff. The current course offerings in explicit SEL training focus on social-emotional foundations of early elementary and youth mental health first aid with neither course explicitly relating to race, the achievement gap, or cultural responsive teaching. As this study was focused at the secondary, high school level, a conclusion of these data was that no explicit and direct professional development in SEC or SEL existed directly for high school staff. The intervention developed in chapters three and four were a foundational theory of treatment towards secondary teacher SEC within the district.

Through an analysis of these data and the frequency of SEC or SEL professional development, the needs assessment research question regarding the degree at which SEC, SEL, and CRT professional development was answered as minimal existence and availability is limited. Through this answer, a need for further explicit SEC, SEL, and CRT professional development exists within the Mid-Atlantic district and will be the focus of intervention.

**Limitations of Data.** A limitation of these data was that qualitative, observable data are not available for each course within the online professional development catalogue. As such, courses not explicitly labeled as concerning SEC, SEL, or CRT may still have contained elements of SEC, SEL, or CRT embedded within course materials. However, a goal of this research was to create explicit professional development in

educator SEC which requires clear presentation which was focused on a single objective of increasing teacher SEC and clear adherence to this objective. Therefore, this limitation did not represent a logical error in the analysis of these data.

### **Chapter Discussion and Conclusions**

This chapter contained two primary purposes: to establish the empirical framework of the existence of a need for increased teacher SEC and to analyze primary data of current existence of the problem within the district and perceptions of the problem and possible treatments for current educators. The discussion in this chapter built upon the contextual and theoretical frameworks in chapter one and provided a transition to the discussion of a proposed theory of treatment within chapters three and four.

## **CHAPTER THREE**

### **INTERVENTION LITERATURE REVIEW**

As discussed in chapters one and two, the framing of the achievement or opportunity gaps through the lens of noncognitive and sociocultural indicators alters approaches to impacting the gap to include factors such as poverty, community stressors, and disconnection from teachers and school cultures (Farrington et al. 2012; Jensen, 2009). When the gaps are viewed as only academic gaps, interventions and reforms focus on improved content instruction and lesson design (Boykin & Noguera, 2011; Gay, 2010; Hammond, 2015). Applying only academic interventions to impact the gaps has not demonstrated significant gains in closing the gaps or provided significant quantitative evidence that a strictly content and lesson design approach, instituted in isolation, provides immediate or long term impacts on student performance (Boykin & Noguera, 2011; Hammond, 2015). An intervention design intended to show immediate or long term impacts on the gaps must include educator strategies at addressing noncognitive and sociocultural indicators such as poverty or social-emotional stressors and the complex relationship between these indicators and decreased academic performance.

The development of interventions to specifically address the noncognitive and sociocultural aspects of the achievement or opportunity gaps are relatively new and have not been uniformly adopted such as reforms focusing on increased testing accountability (Farrington et al., 2012; Jensen, 2009). The beginnings of these interventions must focus on teacher professional development to create immediate impacts at increasing teachers' understanding of key social emotional competencies (SEC) and culturally responsive teaching (CRT) strategies and expanding teachers' understanding of the relationship

between these competencies or strategies and the noncognitive or sociocultural indicators that play a role in the gaps. To building educator knowledge in SEC and CRT, professional development must be a key driver in the intervention. Expanding educator knowledge of SEC promotes increased emotional intelligence (EI) in interactions between students and teachers and creates a classroom culture of routines based on social-emotional learning (SEL) principles such as improved relationships and building student efficacy and emotional resilience. Expanding educator knowledge of CRT bridges racial and cultural gaps between students and teachers in order to also improve student-teacher relationships, student efficacy, and connects with teacher SEC to build student emotional resilience.

Professional development is most successful when it includes practical strategies for student improvement (Jones & Bouffard, 2012). Analyzing, modifying, and implementing theoretical or contextual practices into practical classroom strategies is the goal of professional development interventions. For professional development focusing on increasing educators' SEC and CRT competencies, the strategies presented must assist educators in developing emotionally intelligent (EI) relationships with students as well as incorporating practical classroom practices such as positive relationships, recognition of student emotional baselines, monitoring student efficacy, and increased student emotional resiliency to improve student academic achievement (Elksnin & Elksnin, 2003; Greenberg et al., 2003; Jones & Bouffard, 2012; Queensberry & Doubet, 2006).

This chapter will first establish a rationale for the use of professional development as an intervention for increasing educator SEC and CRT. Models of effective professional development will then be examined to provide a foundation for a theory of

treatment of increased educator professional development in SEC and CRT. Research in the critical constructs of positive student-teacher relationships, efficacy, and emotional resilience will also be explored. To further the professional development theory of treatment, empirical evidence of success in existing SEC and CRT treatments will also be analyzed for how these studies provide for a proposed synthesis of SEC and CRT into one holistic theory of treatment.

### **Professional Development Rationale and Modeling**

Professional development is best described as an organized, networked improvement community designed to create or implement sustained collective action towards a complex problem (Bryk, Gomez, & Grunow, 2010; Engelbart, 1992). In the desired format, professional development is a collective of interest and expertise which makes the network innovative and focused on multifaceted solutions (Bryk et al., 2010). The development of interventions and a theory of treatment for addressing the noncognitive or sociocultural aspects of the achievement or opportunity gaps is a problem that is both complex and contains multifaceted solutions.

This section will provide a rationale for professional development as the proposed intervention for raising educator perceptions of SEC and CRT strategies as a theory of treatment. Second, this session will outline existing modeling and effective types of professional development along with current research in effective outcome evaluation of professional development.

### **Professional Development Rationale**

Building on Bryk et al.'s (2010) definition of professional development as a network of interest and expertise, the proposed intervention is a professional development

model designed to increase educator knowledge SEC and CRT strategies for implementation within the classroom. This rationale will examine strengths of the professional development model with this type of educator growth along with the rationale for use of the professional learning community (PLC) model as a delivery mechanism for the professional development treatment.

**Strengths of Professional Development Model.** Addressing contemporary problems within education is complex with most reforms focused on variations in teacher quality, leadership, school climate, and method for increasing student achievement (Johnson & Fargo, 2010; Johnson, Kahle, & Fargo, 2007). For the most impacted schools, notably schools with low socioeconomic status, limited professional development and teacher community results in teacher-centered instruction and limited professional communities (Johnson & Fargo, 2010). A proposed strength of the professional development model is that it addresses both curricular and noncognitive development needs for educators as well as promotes a sense of trust and professional community within all educators.

In a study of the effects of professional development on instructional practices within an urban school setting, Johnson and Fargo (2010) used the Transformative Professional Development (TPD) program to create effective professional development programs for science teachers within an urban school district. The TPD model contains three main components: intensive and sustained whole-school professional development with cross-curricular foci, focus on building relationships with both staff peers and staff to student, and a focus on the creation of a positive school and classroom climate (Johnson & Fargo, 2010).

In the two-year longitudinal study, four urban schools and corresponding science teachers were identified as two treatment and two control schools for the TPD implementation. Treatment teachers were provided with a two-week, or ten day, intensive introduction to the TPD model with focus on cross-curricular literacy, the role of the learner, and collaborative relationships. The professional development sessions were sustained through monthly observations and follow up conferences. These observations also served as the instrument for evaluation for the study.

Data of program effectiveness were collected through pretest and posttest observations of teacher classrooms using the Horizon Research Local Systemic Change (LSC) observation instrument (Horizon Research, 2002). These data indicated mean growth between pretest and posttest observations were 0.48 and 0.42 in the treatment schools within the context of overall teacher effectiveness protocol growth as compared to 0.34 and -0.30 mean growth for the control schools. Of note in these data is that the first school within the control group already existed in a higher performance counterfactual state than all other schools within the study. In an analysis by Johnson and Fargo (2010), they indicated these data as significant evidence of the sustained growth from professional development which is cross-curricular, multifaceted, and addresses areas of professional collective growth among educators.

With proper implementation, a professional development intervention builds on the strengths of participants and creates shared accountability and investment in growth. As Johnson and Fargo (2010) demonstrate, professional development with clear objectives and a focus on professional, collegiate growth can address complex factors of the achievement gap such as student disconnection from learning or the school culture.

**Building Collegial Trust.** For a professional development intervention to be effective, a theoretical framework of collegial trust among participants is critical (Bryk et al., 2010; Bryk & Schneider, 2002). Moving participants from existing levels of performance to desired levels of performance requires professional development materials which are engaging and do not undermine existing educator strengths or relationships (Bryk et al., 2010).

Collegial trust is critical when dealing with issues of race and cultural responsiveness professional development (Boykin & Noguera, 2011; Bryk & Schneider, 2002). Discussions of race and cultural responsiveness can be misinterpreted to blaming the, often White, teacher for systemic, sociological, or ontological differences in education for minority students (Boykin & Noguera, 2011; Walker-Dalhouse & Dalhouse, 2006).

As was indicated in the needs assessment of this study, current educators responded differently to questions regarding the role of race in student-teacher relationships and student performance with White teachers having significant variance from minority teachers ( $F = 5.455$ ;  $P = .01$ ). Additionally, qualitative feedback comments indicated questioning of the purpose of examining the role of relationships between minority students and White teachers and warnings towards the sensitivity of exploring the issue.

Organized and networked professional development can alleviate the fractioning of educators when discussing complex or personal issues (Bryk et al., 2010). Clearly establishing safe spaces for conversation and adoption of a blame-free discussion ground rules assists in developing the organizational and networked trust needed for effective



professional development dealing with issues of noncognitive or sociocultural issues (Bryk & Schneider, 2002).

**Use of the Professional Learning Community Model.** A professional community of educators is defined as the collaborative work of educators along with the normative controls for guiding the work (Bryk & Schneider, 2002). A current vehicle for building professional collaboration is the professional learning community (PLC) model. A proposition of this study's theory of treatment is the use of the PLC model as a delivery mechanism for the professional development intervention.

The PLC model focuses on four critical questions: (a) what do students need to know, (b) how will we know when students do or do not know it, (c) what will we do when students do not know it, and (d) what will we do when students do know it (DuFour, DuFour, Eaker, & Many, 2010; Sparks & Many, 2015). The PLC model answers these four questions through a shared vision, common planning and pacing, collective data analysis, and problem of practice discourse (DuFour et al., 2010; Sparks & Many, 2015). A major component of the PLC model is regular, organized meeting structures with continuous review and revision based on data and reflection (Sparks & Many, 2015). The organized and continuous structure of the PLC model aligns with Johnson and Fargo's (2010) support of a sustained growth through multifaceted approaches to professional growth. Additionally, the shared vision and reflective nature of the PLC fosters a network of interest and expertise with collective sharing of practices to foster collegial trust (Bryk et al., 2010; Bryk & Schneider, 2002; DuFour et al., 2010; Sparks & Many, 2015).

The effectiveness of the PLC model as a mechanism for delivery of professional development is still an area of developing study but several studies have indicated significant impacts of teacher's satisfaction of professional development embedded in the PLC model. Studies include both professional development applied only through the PLC model as well as comparison data between embedded PLC and other types of professional development.

In a student focusing on a participant action research model, Sompong, Erawan, and Dharm-tad-sa-na-non's (2015) examined the effects of professional development within the PLC model of three primary schools, or 26 teachers, in Thailand. The research design focused on teachers developing the protocols of the PLC model, embedding objective-based professional development, and implementation of materials within the classroom. Data were collected through a four point survey instrument given at pre-intervention and post-intervention stages. In the embedding of objective-based professional development through the PLC model, participants indicated a mean growth indicating satisfaction with the model in all areas. Of note in these data was the mean growth in the use of the PLC model as a delivery mechanism for professional development which data indicated substantial growth between the post-intervention mean (3.1) and the post-intervention mean (4.0 or universal satisfaction). A recommendation from Sompong et al.'s (2015) study was that the PLC model allows for educators to take ownership and trust within professional development materials without the delivery from administration.

While Sompong et al. (2015) examined teacher satisfaction with only a PLC embedded model, Mundy, Howe, and Kupczynski (2015) examined the PLC embedded

model in comparison with other types of professional development such a pre-service, one-shot, and demonstration. In a study of 299 teachers in Louisiana public schools, Mundy et al. (2015) used the Kruskal-Wallis and Friedman statistical tests to examine correlations between teacher satisfaction and the model for delivery of professional development as well as frequency of delivery. These data indicated no significant value added to the delivery method of the professional development (Kruskal-Wallis  $X^2= 14.82$ ,  $p = .011$ ), but the frequency of the professional development did significantly impact satisfaction. This discussion of frequency of delivery will be discussed in the professional development modeling section below.

**Synthesis with Area of Study.** Based on the issues identified in this section, a professional development model within the theory of treatment will address issues of building professional networking and engagement in the noncognitive or sociocultural materials outside of curricular or pedagogical development. The use of the PLC model strengthens the use of the professional development treatment by building sustained and organized systems of professional development without consistent delivery and oversight from administration. Given the sensitivity in delivery of topics including race as identified in both the literature and this study's needs assessment, professional development through the PLC model provides the participants with an opportunity to engage in complex and difficult conversations without consistent oversight by school leadership (Boykin & Noguera, 2011; Bryk & Schneider, 2002; Walker-Dalhouse & Dalhouse, 2006).

## **Professional Development Modeling**

While the rationale for the use of a professional development model was explored in the previous section, the technical implementation of a professional development model must also be explored. This section will examine effective characteristics and structures of professional development, appropriate frequency, and current models of reporting the effects of professional development.

**Characteristics and Structures of Professional Development.** Effective professional development is identified as inquiry-based, content-specific, and aligned with application within the classroom (Saderholm, Ronau, Rakes, Bush, & Mohr-Schroeder, 2016). Professional development objectives, resources, and outcomes must be well-defined, implicit, and applicable to direct classroom implementation (Saderholm et al., 2016). Aligning with Johnson and Fargo's (2010) focus on professional development as demonstrating sustained growth and multifaceted approaches, Saderholm et al. (2016) identify the critical variable of effective professional development must extend beyond professional development sessions to an authentic and transformative effect on classroom teaching. This disconnection from session to classroom is a critical variable that must be avoided with any theory of treatment proposing a professional development intervention.

In a study of math and science teacher content and curricular professional development, Saderholm et al. (2016) observed the implementation of professional development as well as evaluated through participant surveys. Using the Horizon Research Local Systemic Change (LSC) observation instrument (Horizon Research, 2002), Saderholm et al. (2016) observed content professional development for the variables of explicit objectives and implicit incidences of addressing teaching practices.

Using validity measures including a Cohen's *d* effect size, observation data indicated no statistically significant differences among observers and that program objectives and directed instructional practices were captured during observations. However, teacher satisfaction survey data, based on a 5-point scale, indicated lowered percentages of satisfaction in framing the purpose (19% rating 1 or 2), objectives of sessions and opportunities for classroom applications (58% rating 1 or 2), and adequate time for shared experiences and insights on materials (32% rating 1 or 2). These data indicate three areas which must be included in an effective professional development intervention: (1) clear purpose and objectives, (2) classroom applications, and (3) time for reflection and insight. All proposed sessions of a professional development intervention must include these three areas for improved transferability to the classroom.

**Appropriate Frequency for Professional Development.** While no clear delimitation for the number or frequency of professional development exists, studies have agreed that sustained and consistently routine professional development does result in higher teacher satisfaction and transferability to the classroom (Johnson & Fargo, 2010; Mundy et al. 2015; Saderholm et al., 2016). As Mundy et al. (2015) discuss, frequency and quality of professional development are key variables in teacher satisfaction and implementation as opposed to delivery method.

The frequency of professional development is a critical variable in professional development teacher satisfaction and implementation. In a study of 299 teachers in Louisiana public schools, Mundy et al. (2015) examined both the method of delivery as well as the frequency of delivery for teacher professional development. While Kruskal-Wallis and Friedman statistical tests indicated no significant difference in teacher

satisfaction and delivery method, Mundy et al. (2015) did apply correlation matrices to rank the means of frequency of delivery. While not surprising, one-shot delivery (mean rank = 53.73) demonstrated the lowest frequency effect while bi-monthly (mean rank = 78.68) and weekly (mean rank = 103.86) demonstrated the highest frequency effect. While not uniform on the number of hours implied in each frequency ranking, Mundy et al. (2015) indicated a minimum of three months of implementation at one hour per session to replicate the mean rank effect.

Building on Mundy et al.'s (2015) indication of a minimum of three months at one hour per session implementation, specific session numbers and lengths can be designed for maximum effect. Johnson and Fargo (2010) indicate a minimum of two weeks, or 10 sessions, for professional development implementation. However, as will be discussed in the limitations of professional development, Johnson and Fargo's model (2010) identifies sessions as 6-hour, or all day sessions, which will not be applicable to this study due to limitations within organizational design. Likewise, Saderholm et al. (2016) also indicate two weeks, or 10 sessions, as a critical area but do not stipulate the specific length of sessions.

In building with the PLC model, appropriate session lengths will be one hour at a frequency of twice monthly for ten sessions. Specific session design will be discussed in chapter five but this length and frequency does align with the studies of Mundy et al. (2015) and Saderholm et al. (2016).

**Reporting of Professional Development.** Effective evaluation of the outcomes of a professional development intervention are critical to examining successful implementation and retention of professional development materials (Guskey, 2000;

Sztajn, 2011). A common model for professional development evaluation, Guskey's (2000) five critical levels of professional development evaluation focus on both participant and student outcomes. Guskey (2000) identifies the five critical levels as (1) participants' reactions, (2) participants' learning, (3) organization support and change, (4) participants' use of new knowledge or skills, and (5) student learning outcomes. Each level of professional development evaluation addresses critical questions and recommended methods for gathering data. Specific outcome evaluation measures will be discussed in chapter five but these outcome evaluation measures will be guided by Guskey's (2000) five critical levels of professional development.

Similar to Guskey's (2000) five critical levels of professional development, Sztajn (2011) examined recent literature on the methods of evaluating the process and structures of professional development with a specific focus on mathematics education professional development. Sztajn (2011) summarized several critical elements of mathematics education professional development to identify key structural indicators for the evaluation of professional development. These indicators include: (a) knowledge and beliefs of teachers, (b) context of professional development, (c) program goals, (d) critical issues, and (e) strategies. While Guskey's (2000) five critical levels of professional development evaluation examine participant and student responses to programs, Sztajn's (2011) structural indicators examined issues of fidelity of implementation and programmatic outcomes as opposed to participant responses. For example, data indicative of participant knowledge and beliefs, both at a baseline and outcome, are critical to professional development evaluation and the effectiveness of implementation. As will be further discussed in chapter five, Sztajn's (2011) structural

indicators of professional development evaluation will also inform qualitative aspects of program evaluation.

### **Limitations of Professional Development Interventions**

Professional development intervention is a networked experience depending upon the resources, operationalization, and commitment to common outcome goals (Bryk et al., 2010; Guskey, 2000; Sztajn, 2011). With professional development intervention subject to several high impact mediating variables may limit the impact of a professional development intervention which alters desired outcomes. This session will establish several known limitations of a professional development intervention including existing organizational limitations, time for implementation, and other development foci. However, these limitations do not represent a totality of all possible limitations of a professional development intervention and additional limitations will be discussed in chapter six's analysis of research findings.

**Organizational Limitations.** Professional development's most effective articulation is a whole-school or whole-district implementation model which channels all curricular, content, and professional growth through one professional development plan (Johnson & Fargo, 2010). The proposed professional development intervention will not be implemented at either a whole-school or whole-district level due to both the intervention model as a pilot program and conflicts with other professional development foci at both the school and district level. While developing educator SEC and building CRT strategies for all teachers are both school and district foci, this intervention is one method of integrating educators into these foci. As such, participant sample sizes to create high effect sizes and causal outcome evaluations may not be reached and this pilot



study may be framed as an initial study with explicit areas for future research including whole-school or whole-district implementation.

**Limited Time for Implementation.** As discussed above, specific timing and frequency for professional development implementation differ with some indicating sustained, day-long sessions and others indicating chunked sessions with weekly or bi-monthly frequency (Johnson & Fargo, 2010; Mundy et al., 2015). Limited resources and authority of the researcher limit implementation in sustained, day-long sessions. The use of the PLC model provides specific, organized, and routine professional development sessions but are also constrained by time limits of one hour per session at a minimum of a bi-monthly frequency.

**Other Professional Development and Professional Foci.** Similar to organizational limitations, the professional development intervention will not be the only professional development or professional foci for the participant group. Members of the implemented PLCs will still have to focus on common content planning as well as analysis of performance data and other school-wide initiatives. Allowance for other PLC work is the main reason for the limitation of bi-monthly frequency as to allow the PLC members to engage in other activities required through PLC work. As such, careful planning and time is necessary to both ground SEC and CRT materials in common planning or data analysis as well as balance the need for the PLC to complete other tasks.

### **Literature Framework for Intervention**

The literature review within this section will establish pre-existing constructs in order to establish the typological foundation for the theory of treatment as a professional development intervention. This section establishes prominent theories behind the three

critical constructs within the theory of treatment: positive student-teacher relationships, student efficacy, and emotional resilience. Research of the contextual constructs from chapter one of this study, including EI, SEL, SEC, and achievement gaps definitional studies, will be aligned with a treatment design for the professional development intervention.

### **Cognitive and Noncognitive Contexts**

This section of the literature review explores existing literature and theories to reestablish the cognitive, noncognitive, and sociocultural contexts within the achievement or opportunity gaps. The purpose of this section is to further justify the success of existing interventions, rationale for modification of existing interventions, and justification of newly developed interventions.

**Cognitive Contexts.** Sociocultural factors and community stressors such as poverty, community violence, and abuse impact the cognitive functions within the brain (Carrion & Wong, 2010; Jenson, 2009; Kuther & Fisher, 1998). Hackman, Farah, and Meaney (2010) demonstrate the neurological impact of sociocultural factors such as poverty on the brain's ability to create synaptic connections and noted reduction in plasticity and malleability. Using animal and human models, Hackman et al. (2010) indicate lowered brain malleability through computer simulations during prenatal observation when the mother is introduced to the stress of low socioeconomic status or other sociological stressors. These observations align noncognitive and sociocultural factors as impacting the cognitive functioning of the brain.

Extending beyond malleability, the connections between physical, neurological indicators and sociocultural indicators is indicated in increased rates of depression,

anxiety, attention disorders, and conduct disorders in studies of middle and high school students (Carrion & Wong, 2012; Hackman et al., 2010; Valois and Zullig, 2012). The cognitive effects of low socioeconomic status compound neurological effects with social-emotional contexts. This correlation between low socioeconomic and cognitive functions from both academic and social-emotional contexts connects neuroeducation and cognitive theories with proposed interventions aimed at impacting the achievement or opportunity gaps.

These cognitive connections between neurological learning processes and sociocultural factors extend beyond curricular intervention and require neuroeducation-based interventions to improve student social-emotional contexts (Greenberg et al., 2003; Hardiman, 2012; Jones & Bouffard, 2012; McCombs, 1994). Professional development aimed at increasing the pedagogical and curricular skills of a teacher will not positively impact these sociocultural concerns and can further remove students from school cultural and positive academic improvements (Boykin & Noguera, 2011; Farrington et al., 2012; Goleman et al., 2010; Jensen, 2009; Ogbu & Simons, 1998; Ogbu & Davis, 2003).

The connections between neurological learning processes and sociocultural factors contribute to the achievement gap and provide a theoretical foundation for the use of increased teacher SEC as an academic intervention. Hanson (2013) identifies connections between cultural understanding, empathy, and trust and higher order brain functions. Increases in sociocultural awareness, trust, and motivation mindset within educators increases the production of dopamine and increase synaptic connections which prompt critical thinking within students (Hammond, 2015; Hanson, 2012). To support his proposal, Hanson (2013) cites a study completed by Kegel, Bus, and van Ijzendoorn

(2011). Kegel et al. (2011) explored connections between the functioning of D4 Dopamine receptors and different paradigms of learning. Using two groups (an experimental and control) of 312 elementary school students in The Netherlands, Kegel et al. (2011) applied the Living Letters development program to the experimental group to study student's emotional regulatory response to increasing levels of critical thinking and challenge within the program. Additional to the studies of reactions between experimental and control groups, neurobiological testing of genotypes within dopamine receptors indicated that increased emotional support within the experimental group compensated for genetic and developmental gaps in dopamine production. When teachers embed SEL or CRT strategies such as increased positive relationships and empathetic classroom climates, positive reconsolidation occurs within the neural structure of the brain which overwrites negative associations with learning such as anxiety or disassociation from class or school culture (Hammond, 2015; Hanson, 2012).

Alternatively, classrooms without sociocultural awareness, trust, emotional regulatory supports, and contain fixed or negative mindsets increase the release of cortisol, adrenaline, and reduced working and long term memories (Hammond, 2015; Hanson, 2012; Hardiman, 2012). Hammond (2015) expands Hanson's neurological studies to apply connections between CRT and classrooms with increased critical thinking and content rigor. Hammond (2015) proposes that culturally responsive methods and positive mindsets among teachers increase student functioning within the zone of proximal development and increase states of relaxed alertness and, by proximate, increase student attention and achievement. Hammond (2015) proposes that culturally responsive methods and positive mindsets among teachers increase student functioning

within the zone of proximal development and increase states of relaxed alertness and, by proximate, increase student attention and achievement.

The cognitive and neuroeducation contexts presented in this section support a theoretical assumption that noncognitive or sociocultural stressors such as poverty or social-emotional trauma directly impact the cognitive functioning of the brain. A theory of treatment for this noncognitive or sociocultural view of cognitive functioning requires treatment dosage focusing on increasing teacher SEC and CRT knowledge in order to negate longstanding neurological impacts of negative sociocultural factors on students' willingness to engage in classroom activities or school culture which results in negative impacts of student achievement.

**Noncognitive Contexts.** In addition to the cognitive effects of community stressors on the learning process, community stressors also impact student achievement from a noncognitive perspective. Noncognitive contexts include social and emotional skills, self-efficacy, mindset, and attitudes for both students and teachers (Farnham, Fernando, Periogo, Brossman, & Tough, 2015). Students developing effective coping or regulatory skills when interacting with noncognitive or sociocultural stressors have increases in the critical social-emotional skills such as self-efficacy, improved relationships, and executive functioning (Farrington et al., 2012; Pintrich & De Groot, 1990; Purdie, Hattie, & Douglas, 1996; Webb, Carey, Villares, Wells, & Sayer, 2014).

In a study of 4,321 fifth graders of mixed socio-economic and racial demographics, Webb et al. (2014) studied the effects of implementing social encouragement strategies through a hierarchical linear modeling testing the respondent variance between a treatment and control group. Over a one year period, pre- and post-

intervention test scores, grades, and attendance records were collected as well as self-reported student surveys focusing on self-efficacy, self-regulation, and learning anxiety. Results from the study indicate there are beneficial effects of the prosocial encouragement strategies with a focus on reducing school anxiety as an impact on academic performance (the treatment group differs from a baseline coefficient of 1.874,  $t$  ratio of 36.78, and  $p = <.001$ ) and increasing student engagement in materials (treatment group differs from a baseline coefficient of 3.53,  $t$  ratio of 91.53, and  $p = <.001$ ).

The correlation between retention within the development of noncognitive skills such as efficacy and school cultural engagement and student performance contributes greatly to the achievement or opportunity gaps (Boykin & Noguera, 2011; Carey, 2014). In many school or classroom contexts, minority students have a lowered sense of self-efficacy, academic self-regulation, and skills related to emotional resilience (Boykin & Noguera, 2011; Hammond, 2015). Without these skills, students find difficulty in accessing the curriculum and engaging in school cultures which leads to lowered academic performance and increased dropout or expulsion rates (Gay, 2010; Hammond, 2015; Ladson-Billings, 1995; Ladson-Billings, 2002; Noguera, 2003).

### **Outcome Constructs**

To begin building a theory of treatment around a professional development intervention, identification of measurable outcome constructs within the research design is an important first step. For this student, the outcome constructs are identified as: positive student-teacher relationships, efficacy, and emotional resilience. In this section, these outcome constructs will be established within the theoretical framework of existing literature.

**Positive Student-Teacher Relationships.** A critical outcome construct within the intervention design is increasing teacher competencies in positive student-teacher relationships and increasing student self-perceptions of positive student-teacher relationships. Positive classroom relationships increase student attention and engagement with academic materials as well as lower instances of disciplinary referrals and truancy (Boykin & Noguera, 2011; Noguera, 2003). When examined through a lens of cultural responsiveness, positive student-teacher relationships serve as a strategy to improve a classroom climate which promotes student apathy caused by stereotype threat, poor perceptions of school and teachers, negative feelings of efficacy among student groups, and inaccessibility to Euro-centric curriculum (Boykin & Noguera, 2011; Gay, 2010; Hammond, 2015; Ladson-Billings, 1995; Ladson-Billings, 2002; Ogbu & Simons, 1998; Ogbu & Davis, 2003; Steele, 1997).

In a study of pro-social, relationship development professional development, Boorn, Hopkins Dunn, and Page (2010) outline a program focusing on the development of nurturing classrooms within 73 schools in Leicestershire, UK. Boorn et al. (2010) isolate three critical variables for nurturing relationships: (1) secure relationships, (2) attachments, and (3) emotional resilience. Professional development focusing on developing these three areas was presented over the course of four sessions of a two day course or three sessions of a two day course depending on school schedules of 16-35 teachers per group. Data for the professional developments sessions were collected through participant post-session Likert scale survey questionnaires gathered at the beginning of the training and three months after the trainings concluded. These data indicate a mean of 4.0 within the context of the training materials impact on classroom

environment and improvements in students' behaviors. More so, a mean of 4.5 was indicated in terms of strategies benefiting students' social, emotional, and behavioral development. This study and these data support a model of professional development as a method for delivery of prosocial, relationship-building professional development.

**Student Efficacy.** Self-efficacy, within a psychological and pedagogical context, refers to one's abilities to organize, participate, execute, and reflect upon cognitive tasks and prospective situations (Bandura, 1977; Bandura, 1995; Bandura, 1997; Schunk, 1987; Schunk, 1989). Bandura's (1997) model of self-efficacy is built upon a theoretical foundation of social value and a causality between social supports and desire to engage in perseverance. Self-efficacy is critical to students' self-regulation, motivation, and affective reactions to situations (Bandura, 1995; Oettingen, 1995). Sociocultural adversity, such as poverty or disrupted family structures, creates variability in students' self-efficacy and requires the support of social figures such as teachers or counselors to increase opportunities for self-efficacy (Elder, 1974; Elder, 1995; Elder, Caspi, & Van Nguyen, 1986).

A major component of Bandura's self-efficacy model are the stages of triadic reciprocal determinism (TRD) or the relationship between behavioral, personal, and environmental factors (Bandura, 1997). Aligning with a social cognitive theory, Bandura's TRD is a cognitive theory expression of the connections between positive student-teacher relationships, a teacher's awareness of a student's social-emotional space, and how outside of the classroom factors impact cognitive growth and learning (Bandura, 1997; (Farrington et al., 2012; Jennings & Greenberg, 2008). Creating connections between a student's behavior, personal motivation, and outside environmental factors is a



critical outcome for any professional development focusing on SEC and CRT strategies for teachers as it extends a teacher's reflection beyond content and to levels of social cognitive and social-emotional development for students.

Valois and Zullig's (2012) study of emotional self-efficacy establishes connections between low self-efficacy and low academic performance with the variables of race and gender. Valois and Zullig (2012) analyze survey data of risky behaviors, through an ANOVA test, and establish a self-efficacy variable connected to socio-economic and racial identifiers with male and African American students self-identifying with lowered self-efficacy. Providing survey questionnaires to 2566 high school students, Valois and Zullig (2012) develop a student self-efficacy Likert scale. In questions focusing on emotional self-efficacy (ESE), these data indicated a significant standard deviation difference of 1.1 to 2.4 between White and African American student respondents in regards to questions directly relating to ESE. In comparison, the standard deviation between in-racial groups was 0.72 to 1.1. Additionally, correlations were established between lowered self-efficacy and lowered sense of academic worth, self-regulation, and increased engagement in risky social behaviors. These data demonstrate the critical variable of student self-efficacy within the context of SEC or CRT intervention treatments if treatment is to apply to increases in student, with a focus on minority student, self-reporting of positive self-efficacy.

**Emotional Resilience.** The adaption of emotions based on external stimuli or situations is a key prosocial behavior (Rubin, 1999). Emotional resilience, or positive responses to social or emotional adversity, is a critical characteristic of increased EI and the cognitive skills to manage stress, interpret emotion, and critically evaluate situations

(Mayer & Salovey, 1997; Mayer et al., 1999; Salovey & Mayer, 1990). In an academic context, emotional resilience assists students in responding to anxiety-arousing situations, increases social adaption skills, and increases engagement in positive school relationships (Greenberg, Kusche, & Riggs, 2004; Brenner & Salovey, 1997).

While still an area for future study, links between increased emotional resilience and negation of the noncognitive or sociocultural impacts of the achievement or opportunity gaps do exist in a few studies. One conceptualization of the relationship between emotional resilience and the achievement gap is Reyes and Elias' (2011) exploration of Latino youth culture, critical sociocultural impacts such as poverty and violence, and racial discrimination and school structures not equipped to provide the emotional resilience supports needed for minority students. While relying on a literature review and not newly analyzed data, Reyes and Elias (2011) provided a theoretical framework for the relationship between minority students, noncognitive and sociocultural factors, and gaps within programmatic responses to increase emotional resilience. These programmatic responses such as, developing student emotional baselines, emotionally aware responses to student emotional stressors, and culturally relevant responses to students in crisis form a theoretical and application framework within the professional development intervention as well as a measurable outcome variable as to add additional empirical evidence of this claim.

### **Alignment of Outcome Constructs and Proposed Intervention**

The contextual framework from chapter one focused on existing definitional and contextual concepts within EI, SEL, SEC, and achievement or opportunity gaps interventions. The purpose of this section is to ground the proposed professional

development intervention in these existing concepts and foundational definitions and theories. These contextual constructs will also be aligned with the three critical outcome constructs of the theory of treatment (positive student-teacher relationships, efficacy, and emotional resilience).

**Social Emotional Competency.** Providing teacher participants with a clear definition of social emotional competencies (SEC) is critical for success within the theory of treatment. SEC are connected with teachers' behaviors and not curricular interventions (Jennings & Greenberg, 2008). The creation of a prosocial and SEC aware classroom is guided by positive emotional expression, awareness of and reaction to negative comments, and awareness of student emotional baselines and deviations (Jennings & Greenberg, 2008; Lopes & Salovey, 2004). Teachers creating prosocial and SEC aware classroom climates note increased student efficacy, enjoyment in subject matter, and ability to regulate emotional stressors (Goddard et al., 2004). Although prosocial and SEC classroom climates are critical to student success, a prevailing opinion among professional developers is that SEC skills are inherent in teachers and does not require explicit professional development (Jennings & Greenberg, 2008). To counter with opinion, the professional development theory of treatment actively engages teacher participants in discussions of existing baselines and areas for growth in the context of SEC skills.

In a study of teacher SEC development, Ransford et al. (2009) analyzed the effects of the PATHS program (Kam, Greenberg & Kusche, 1994) on teacher psychology and efficacy at maintaining prosocial, SEC aware classrooms. Greenberg and Kusche's (1994) PATHS program will be further explored in the existing studies section of this chapter. Conducted in a high need, low SES school district, Ransford et al. (2009) studied teacher perceptions of district implemented PATHS curriculum and effectiveness at

increasing teacher SEC. Using a sample size of 156 elementary teachers, participants answered a modified version of the Maslach Burnout Inventory (MBI) (Maslach, Jackson, & Schwab, 1996) as related to emotional exhaustion, depersonalization, and achievement within the classroom. The Likert scale rating altered as program treatment was increased with the results revealing statistical significant growth in teacher identification of SEC concepts as well as lowered indications of psychological burnout through the implantation of SEC concepts.

**Achievement Gaps Contexts.** Within the organizational context of this proposed study, critical theories behind the achievement or opportunity gaps, such as the intersections of race and socio-economic status and perceptions of classroom stereotypes, are integrated into frequent professional development and district-wide goals and expectations. For the context of this study, building upon or modifying existing studies to discover intersections of CRT and prosocial or SEC contexts are critical for success of the theory of treatment.

Effective communication is a critical component of both CRT and SEC classroom climates. Mehan, Hubbard, Villanueva, and Lintz (1996) outline the critical aspects of communication and emotional empowering of students through coaching and carefully crafted student-teacher relationships. This social scaffolding method encourages teachers to extend beyond curriculum to engage students in social problem-solving techniques and social-emotional ownership of both their academic performance and social perception (Mehan et al. 1996). Social scaffolding reverts classroom hierarchies from a panoptical perspective to shared decision-making and creates shared cultural capital around both curricular and social classroom decisions (Mehan et al. 1996). Social scaffolding requires

carefully defined student-teacher relationships and awareness of specific challenges to the SEL capabilities of minority students due to outside of the classroom or high risk community stressors (Gay, 2010).

**Effects of Sociocultural Issues on the Achievement Gaps.** Minority students of all ages are more likely than White students to experience or be influenced by major social or emotional trauma such as community violence, abuse, unstable home life, or substance abuse (Gaylord-Harden et al., 2011). These factors contribute to lower academic performance, increased dropout rates, and increased self-destructive behaviors (Valois & Zullig, 2012).

Defining the effects of sociocultural issues, or community stressors, on the achievement or opportunity gaps is a critical framework to establishing why SEC and CRT professional development is an avenue for intervention (Farrington et al., 2012; Jensen, 2009). The existence of sociocultural issues and the impact on the gaps separates this exploration of the gaps from other interventions such as testing accountability, behavioral interventions, and curricular intervention in that it focuses on providing educators with strategies for extending intervention supports beyond the curriculum and to the sociocultural barriers which contribute to lowered academic performance for students (Allensworth & Easton, 2007; Ames & Archer, 1988; Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Lee & Axelrod, 2005).

### **Empirical Support of Intervention**

This section will examine qualitative and quantitative evidence within research of existing SEC and CRT interventions. The purpose of this section is to provide existing

data and evidence of successful implementation of existing or modified interventions to strength the theory of treatment.

**Impact of SEC and SEL on Students and Teachers.** Establishing a baseline of the SEL level of students provides a data-based foundation for teacher SEC professional development. These baseline data are found in the areas of social interdependence and engagement (Christenson & Havsy, 2004; Johnson & Johnson, 1989; 1995; Zins et al., 2000). These baseline data are integrated into the definitional professional development sessions of the treatment as a justification for the need of the treatment.

Connections between teacher SEC and student SEL are not only focused on increasing student SEL but in creating corresponding increases in teachers' positive experiences (Frenzel, 2014; Hagenauer, Hascher, & Volet, 2015). To provide value added meaning to the professional development treatment, data focusing on increased levels of teachers' sense of joy and emotional resilience connect with data regarding student improvement.

**Social Interdependence.** Social interdependence refers to a students' ability to form collaborative or collective partnerships with both peers and teachers (Johnson & Johnson, 1989; 1995; Johnson, Johnson, & Holubec, 1998). Social interdependence is a critical EI skill for engaging in higher order thinking as it connects directly to a student's ability to synthesize between multiple levels of instruction including lecture to structured discourse (Johnson et al., 1998). Without an appropriate level of SEL, students' social interdependence is challenged and cooperative learning opportunities are limited.

In a meta-analysis of social interdependence studies, Johnson and Johnson (1989) study the mean effect size of 100 correlation studies focusing on social interdependence

and key SEL variables such as self-esteem, social support, and interpersonal attraction. Johnson & Johnson's (1989) meta-analysis supports a correlation between cooperative social interdependence support from teachers and higher achievement as compared to the effect of individualistic climates. For example, in a comparison of self-esteem, a mean effect of 0.58 was reported after social interdependence support as opposed to a mean effect of -0.23 for students reported as individualistic or without social interdependence supports (Johnson & Johnson, 1989). These data show correlations between increased teacher attention to social interdependence and student SEL with student achievement.

**Engagement.** Student engagement is a critical element of any reform effort to increase student performance. From a SEL perspective, engagement is viewed as the intersection of psychological health and cognitive capacities (Christenson & Havsy, 2004). This symbiotic relationship proposes that without high levels of SEL among students, higher order cognitive capacities and engagement in critical thinking are challenged or are replaced with anti-social or non-academic behaviors (Christenson & Havsy, 2004). Engagement from a SEL perspective is the intersection of cognitive and noncognitive perspectives.

A critical SEL aspect of engagement is future expectations and the level of support teachers and staff provide to students to promote optimistic expectations of ability (Israelashvili, 1997; Taylor & Brown, 1988). In a two study design, Israelashvili (1997) examines the impact of optimistic teacher attitudes on students' views of optimistic future opportunities and current levels of engagement. For the first study of 307 fifth to twelfth grade students in a mixed SES area, a Likert scale was used for student self-reporting surveys. In the first study, a two-way analyses of covariance

(ANCOVA) was used to analyze the variance in respondents for students who positively indicate that teachers respect and support them socially and emotionally and those who provided negative indications on these topics. In the second study, 164 female high school students from a predominantly low SES area responded to the same self-reporting surveys. These data from the second study not only validate data from the first study but show the relationship between SEL supports and student feelings of engagement and future expectations. These data provide evidence of a relationship between pro-social, SEL strategies and improved feelings of engagement and optimism regarding future expectations with a focus on the second study and the impact of feelings of engagement on noncognitive factors such as low SES.

**Social-Emotional Competencies and Educators.** Student academic performance levels and SEL competencies have a correlative relationship with teachers' emotions and SEC (Hagenauer et al. 2015). When examining the precedent and antecedent relationship between student SEL and teacher SEC, emotions of both groups are viewed as significant antecedents of student learning and achievement (Glaeser-Zikuda, Stuchlikova, & Janik, 2013; Hagenauer et al. 2015; Hargreaves, 1998; Newberry, Gallant, & Riley, 2013). The social and emotional wellbeing of both students and teachers are intricately connected and exist in a co-dependent model.

Unlike other professions, teachers' emotional outputs, either positive or negative, impact the productivity and development of clients (students) with minimal difference between a teacher's external and internal emotions (Frenzel, 2014). Frenzel (2014) identifies three key emotional competencies of teachers that have correlative effects on classroom climate: (1) joy, (2) anger, and (3) anxiety. As such, teachers' emotional



outputs are included within classroom climates and content discourse and the inclusion of prosocial and positive emotional output by teachers corresponds to positive outputs by students.

Building on Frenzel's (2014) key teacher emotional competencies, Hagenauer et al. (2015) provided 132 high school teachers from a range of SES schools with a questionnaire focusing on emotional output by teachers within the classroom.

Intercorrelations, measured by means and standard deviations, between teacher output of the three emotional competencies and student output of the three emotional competencies were measured within the study. Teachers' perceptions of joy and positive relationships with students correlated with positive emotional outputs by students and with teachers' perceptions of anger or anxiety correlating with negative emotional outputs by students. A mean variance of teachers' perceptions of joy and positive student emotional output and anger or anxiety and positive student emotional output was 3.21 and 1.44 respectively (*SD* of .71 and .62 respectively) indicating a significant difference in higher rates self-reported positive teacher emotional output with lower rates of self-reported negative student emotional output. These data provide foundational support in the need for teacher awareness of SEC and the impact on student SEL and emotional output as framed within the theory of treatment.

**Culturally Responsive Interventions and the Proposed Intervention.** A critical feature of the professional development theory of treatment is the synthesis between prominent SEC, SEL, or EI theories and strategies with prominent CRT theories and strategies. To support this synthesis, empirical studies of the impact of existing CRT treatments will be incorporated into a discussion of the strategies presented. When

possible, synthesis between SEC, SEL, or EI theories and strategies with CRT theories and strategies will be made explicit within the context of the professional development sessions.

**Psychosocial Relationships.** Psychosocial supports for students are critical to promote engagement in school culture and engagement in advanced academic courses (Boykin & Noguera, 2009; Chambers & McCreedy, 2011). Psychosocial supports reduce the effects of academic or cultural marginalization in addition to the moderating effects of community stressors (Chambers & McCreedy, 2011; Chauhan & Dickson, 2009). Positive student-teacher relationships, in addition to reflection on institutional barriers to success, are important first steps to providing psychosocial supports to minority students (Barajas & Ronnkvist, 2007; Boykin & Noguera, 2011; Chambers & McCreedy, 2011).

In a qualitative study of two high schools, Chambers and McCreedy (2011) observed two case studies of seven and twenty African American students in various academic tracks from advanced to alternative programs through a combination of classroom observation, document analysis of student work, and student focus groups. The first case study was of seven students at a predominantly White suburban high school and the second case study was of twenty students in a mixed demographic urban high school. The first finding of both studies was that minority students at both schools report feelings of marginalization by multiple cultural identities with a focus on the isolation feelings of minority students taking advanced course work (Chambers & McCreedy, 2011). The second finding of the studies was that minority students will respond to marginalization either through either independent or dependent creation of sociospatial strategies. When not provided with positive student-teacher relationships or institutional foci, students

reported a disconnection from school culture and sought out psychosocial support through peer influence (Chambers & McCready, 2011). For students finding psychosocial support through positive student-teacher relationships, the effects of racial marginalization were mediated and students reported that they were more accepting of class and school culture (Chambers & McCready, 2011). An important note on these findings is the role of positive student-teacher relationships as framed through a culturally responsive lens and not based in Euro-centric values or judgments as noted in the comments of successful students within case study focus groups (Barajas & Ronnkvist, 2007; Chambers & McCready, 2011).

The act of creating psychosocial supports through positive student-teacher relationships is a synthesis of social-emotional and CRT strategies through recognition and intervention in racial marginalization through explicit and deliberate student social and emotional support (Boorn et al., 2010; Chambers & McCready, 2011). While not a cognitive or curricular support, creating culturally responsive, psychosocial relationships is a classroom practice or routine which will be integrated into the CRT sessions within the professional development theory of treatment.

**Culturally Responsive Interventions.** As explored in chapter two of this work, the achievement gap extends beyond a cognitive or academic gap and incorporates noncognitive or sociocultural variables such as poverty or school engagement (Farrington et al., 2014; Jensen, 2009). Byrnes (2003) identifies three premises, through the lens of mathematics teaching, for differences in achievement based in race: (1) cultural effectiveness of interventions, (2) the multifaceted nature of the achievement gap, and (3) existing empirical explanations for the achievement gap. Through the lens of CRT,

Byrnes' (2003) first and second premise speak specifically to the need for culturally responsive interventions which extend beyond curriculum to address the social, emotional, and cultural needs of minority students.

In a study of teacher beliefs, Walker-Dalhouse and Dalhouse (2006) provided 92 mixed level pre-service teachers with a questionnaire adapted from Henry's (1995) Cultural Diversity Awareness Inventory (CDAI) which focuses on agree or disagree questions based on cultural investment in the classroom and the impact of multiculturalism on student achievement. All participants were White and students at a predominantly White upper income university. The CDAI was given as a pre- and post-test survey before and after enrollment in a multicultural and diversity practicum. These data indicated mean differences in the pretest and posttest results regarding the importance of understanding and interacting with cultural differences yet did not demonstrate the same differences in questions relating to actual adaption of curricular content or assessments from a culturally responsive perspective. These data indicate a recognition of the importance of CRT interventions yet minimal understanding of practical application or embedding of CRT interventions within the classroom.

Culturally responsive interventions focus on classroom culture in addition to curriculum, pedagogy, and content delivery (Boykin & Noguera, 2011; Gay, 2010; Hammond, 2014). A critical CRT intervention is a teacher's metacognitive or reflective routines when responding to students of varying ethnicities and how ethnicity controls expectations or responses to a student (Byrnes, 2003; Gay, 2010; Hammond, 2014; Ladson-Billings & Tate, 1995). Reflective, non-assumptive interactions with students are prime attributes of CRT and the creation of prosocial, SEL-embedded classrooms (Case

& Hemmings, 2005; Gay, 2010; Hammond, 2014; Walker-Dalhouse & Dalhouse, 2006). Explicit strategies for using CRT interventions, within the context of increasing student SEL, is a prominent discussion within the CRT professional development sessions within the theory of treatment.

### **Existing Interventions**

To define the theory of treatment and inform the method of evaluation of the treatment, three existing interventions will be examined in this section. These interventions are predominantly explicit SEC or SEL interventions with CRT synthesis between typologies highlighted within the analysis of the Warm Demander Pedagogy intervention.

#### **Promoting Alternative Thinking Strategies (PATHS)**

The Promoting Alternative Thinking Strategies (PATHS) is a specific development curriculum for teachers with a focus on promoting students' emotional development, self-regulation, and social problem-solving skills (Greenberg & Kusche, 1993; Kam et al., 2004). Although designed for elementary school programs, the PATHS program's focus on building student SEL character traits with a focus on the study constructs (positive student-teacher relationships, efficacy, and emotional resilience) of the theory of treatment make the PATHS program a valid intervention even at the secondary level (Greenberg & Kusche, 1993; Kam et al. 2004; Ransford et al. 2009).

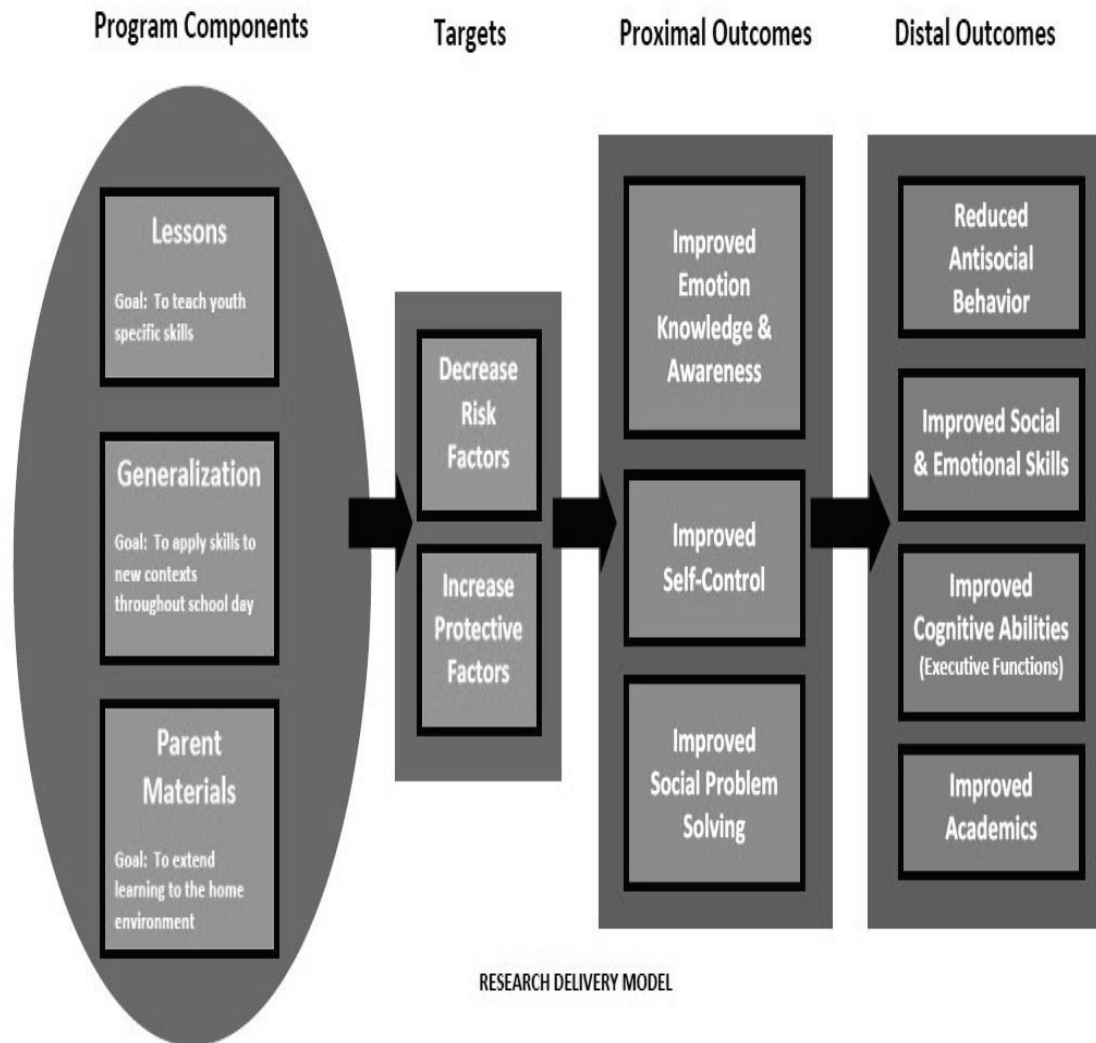
**Study Overview.** The general overview of the PATHS curriculum is implementation of a professional development model for teachers focusing on social-emotional development for elementary school students. Kam et al. (2004) examine the long-term effectiveness of implementing a PATHS curriculum on the performance of

elementary students with special needs. Building on the PATHS program developed by Greenberg & Kusche (1993), Kam et al. (2004) identify three variables for study within implementation of the PATHS program: (1) emotional development, (2) self-regulation, and (3) social-problem-solving skills within students. Emotional development is defined as cognitive emotions learned through social interactions and appropriate self-regulation of emotions by students during this development stage. A final growth of the PATHS programs is developing a synthesis of skills within students to respond to both positive and negative social interactions.

**Theoretical Framework.** The theoretical framework of Kam et al.'s (2004) intervention builds upon Greenberg & Kusche's (1993) PATHS program. The PATHS program focuses on the importance of developmental integration, emotional language, and cognitive understanding of social and emotional stimuli as optimal intellectual skills in children (Greenberg & Kusche, 1988; 1993; Kam et al., 2004). A theoretical proposition of the PATHS program is that social and emotional development mirrors cognitive and linguistic functions and a critical development zone occurs when a child develops verbal self-regulation (Kam et al., 2004). This theoretical proposition guides four assumptions of the PATHS program: reduced anti-social behavior, improved social and emotional skill, improved cognitive functions with a focus on executive functioning, and improved academics (Greenberg & Kusche, 1988; 1993; Kam et al., 2004). A causal assumption of the PATHS program is that school environment, including teachers, can be a central locus of change (Kam et al., 2004). To further explain the inputs and outcomes of the PATHS program, a logic model adopted from Greenberg and Kusche's (1993) original study is provided below as figure 2.

Figure 2

*Greenberg and Kusche's Logic Model for PATHS*



Adapted from Greenberg, M. T., & Kusche, C. A. (1993). *Promoting social and emotional development in deaf children: The PATHS Project*. Seattle: University of Washington Press. Figure retrieved from <http://www.episcenter.psu.edu/sites/default/files/ebp/Promoting-Alternative-Thinking-Strategies-Logic-Model-5-12-2014.pdf>

**Methods and Results.** The curriculum model of the PATHS program includes: (1) self-control unit, (2) feelings unit, and (3) problem-solving unit delivered directly to teachers (Kam et al., 2004). For the purpose of Kam et al.'s (2004) study, teachers received professional development in the three units and then applied learned materials to classrooms for approximately 20 to 30 minutes for up to three times a week. This level of

application is a delimitation of elementary implementation that would not be successful at a secondary level due to content-specific requirements at the secondary level. However, critical theoretical and structural elements, such as the professional development session structures and topics, are applicable to teachers at the secondary level.

The participants included 21 teachers with 16 general education teachers and 5 special education teachers along with corresponding elementary students. A mixed methods design was used to evaluate programmatic implementation. Qualitative variables included coding the use of vocabulary by students and responses to focus group scenarios. Quantitative variables included a self-reported survey by students of emotional baselines and abnormalities, teacher rating scales of problem behavior management, and teacher ratings of social and emotional competencies. Of note in the survey is the use of the Teacher-Child Rating Scale (TCRS) (Hightower et al., 1986) within the context of teacher SEC ratings as the TCRS is an effective scale for gauging teacher SEC baselines and growth.

Results of the study demonstrated statistically significant growth in the ability of students to externalize and process emotional stimuli ( $T$  ratio = 2.029,  $p < 0.05$ ) and a decrease in internalizing of emotional behaviors by teachers ( $SD = 1.84$ ;  $X^2 = 228.78$ ) between pre- and post-test surveys. Additionally, statistically significant variance was found in the student group in terms of reductions in the generation of aggressive emotional responses ( $p < 0.04$ ). These data demonstrate empirical support for the effectiveness of the PATHS program with special attention to growth within teacher self-reporting of emotional competency growth.



**Synthesis with Intervention.** Within the professional development theory of treatment, PATHS informs the explicit EI, SEC, and SEL sessions to frame and operationalize strategies for students. Kam et al. (2004) position SEC and SEL as fundamental cognitive skills and critical for the emotional regulation needed for engagement in higher order learning activities. PATHS provides specific strategies for developing teachers' SEC and students' SEL including language reflection, recognizing emotional baselines, and socio-ecological validity to student issues (Greenberg & Kusche, 1993; Kam et al., 2004; Ransford et al., 2009).

### **Cultivating Awareness and Resilience in Education (CARE)**

Forming meaningful, socially and emotional competent relationships between teachers and students is a promoted intervention which intersects both social-emotional and achievement or opportunity gaps frameworks. Identifying, communicating, and evaluating the quality and frequency of positive student-teacher relationships is a fundamental element of the professional development theory of treatment which extends into both SEC and SEL sessions and CRT sessions.

**Study Overview.** Jennings et al. (2014) both define SEC within the context of teacher education and provide empirical evidence of the success of a SEC treatment intervention. The SEC development and growth of teachers is significant to the development and maintenance of positive student-teacher relationships, effective classroom management, and the promotion of SEL classroom climate factors such as efficacy and emotional resilience (Jennings et al., 2014). To provide teachers with explicit SEC professional development, Jennings et al. (2014) model the Cultivating

Awareness and Resilience in Education (CARE) program to promote and improve teachers' SEC and application to the classroom.

**Theoretical Framework.** Building upon Jennings and Greenberg's (2009) previous definitional work of SEC, Jennings et al. (2014) propose SEC as a progenitive concept which is required by educators in order to promote SEL core competencies such as positive relationships, efficacy, and emotional resilience in students and classroom climate. Without effective and defined SEC training, teachers cannot successfully promote SEL to students or establish prosocial and emotionally aware classroom climates.

Cultivating high SEC in teachers also improves teacher mindset dimensions such as teacher efficacy, mindfulness, and relationship skills. Jennings et al. (2014) build upon Jennings, Frank, Snowberg, Coccia, and Greenberg's (2013) self-reported perceptions of teacher mindfulness and effectiveness at SEL after receiving explicit SEC professional development. The CARE program's effects are both applicable to higher SEL quotients within students as well as improved self-reporting of teacher mindsets.

**Methods and Results.** The study follows a trial of 50 elementary teachers randomly selected to participate in the CARE program. The CARE program was presented to participants in four sessions over a 4-6 week period with additional follow up and observation by the program facilitators.

Data collection was done through self-reported questionnaires collected from both the participant and a wait listed control group. The survey data focus on questions related to teachers' understanding SEC core concepts, teachers' sense of efficacy around SEC

core concepts, teachers' own emotional regulation and resilience, and teacher mindfulness.

Data were analyzed through an ANCOVA statistical test with pre-tests from both the experimental and control groups serving as covariate data. Analysis of results indicated significant statistical effects ( $p < .01$ ) in comparison of experimental and control groups. Disaggregate topical data also demonstrated statistically significant growth between the experimental and control groups. The experimental group reported less anxious perceptions of classrooms ( $p \leq .01$ ,  $d = -.77$ ), increased positive classroom outlook ( $p \leq .02$ ,  $d = .26$ ), and improved perceptions of mindfulness when applying SEC to classroom situations ( $p = .05$ ,  $d = .77$ ).

**Synthesis with Intervention.** Like the PATH program, CARE is a previously implemented intervention which informs the professional development intervention theory of treatment. Explicit strategies from the CARE program such as creating social-emotional mindfulness routines, emotional awareness, and empathetic emotional regulation are key SEC concepts which are explicitly explored in the EI, SEC, and SEL professional development session.

### **Warm Demander Pedagogy (WDP)**

A primary need within the professional development intervention is a synthesis of SEC or SEL strategies with CRT strategies. This synthesis of social-emotional and culturally responsive supports is found in the Warm Demander Pedagogy (WDP) method (Bondy, Ross, Hambacher, & Acosta, 2012; Kleinfeld, 1972; Ross, Bondy, Gallingane, & Hambacher, 2008; Ware, 2006).

A common criticism of strategies focusing on SEL as an intervention for impacting the achievement or opportunity gaps is that these strategies also lower expectations or academic rigor for minority students (Boykin & Noguera, 2011; Hoffman, 2009; Ware, 2006). WDP develops teachers who are understanding and culturally competent yet also uphold high academic and behavioral standards within the classroom (Bondy et al., 2012; Ross et al., 2008; Ware, 2006). WDP focuses on specific strategies such as classroom organization, developing student self-regulation skills, and clear, democratic classroom rules (Bondy et al., 2012; Kleinfeld, 1972; Ross et al., 2008; Ware, 2006).

**Theoretical Framework.** WDP increases teacher efficacy and reduces burnout by providing both classroom strategies (democratic expectations, repeat and reinforce, and insistence) as well as increased positive relationships and climate within the classroom (Ross et al. 2008; Ware, 2006). WDP aligns positive classroom strategies (language awareness, alignment of core values, and interaction reflection) with SEC and SEL strategies such as self-regulation and emotional resilience (Elksnin & Elksnin, 2003; Ware, 2006).

A critical theoretical proposition of WDP is an intersection between establishing clear routines and high expectations with caring, respectful, and culturally relevant relationships (Bondy et al., 2012; Ross et al., 2008; Ware, 2006). Differing from the reactionary and often spontaneous SEC or SEL strategies, WDP follows clear, specific strategies for establishing the structures and practices for the classroom (Bondy et al., 2012; Elksnin & Elksnin, 2003; Ross et al., 2008; Ware, 2006). These strategies include: (a) verbalizing clear expectations, (b) repeat, remind, reinforce, (c) consistent responses,

and (d) a tone of insistence (Bondy et al., 2012). It is important to note that while WDP is a critical synthesis between SEC and CRT strategies, a clear foundation of SEC and CRT strategies must be firmly established with participant educators before implementing WDP practices as these structures and practices could result in negative interactions if proper SEC and cultural responsiveness are not applied by educators (Ware, 2006).

**Methods and Results.** A limitation of existing literature on the effectiveness of WDP is missing quantitative evidence of programmatic outcomes. However, existing qualitative data do demonstrate implementation of WDP professional development to mixed experienced range teachers to implementation success.

In a qualitative study of 26 practicing teachers participating in the Unified Elementary Proteach (UEP) program, Bondy et al. (2012) identified the impact of WDP lessons on teachers teaching exclusively in low-income and predominately minority elementary schools. Data were collected through videotape and interview data of both participation in the WDP professional development as well as in implementation within the classroom. These coded data indicated both implementation in the classroom but also areas for growth in universal implementation of WDP. For example, participants indicated through interviews and demonstrated through classroom observations of the implementation of WDP strategies such as routines, dedicated positive comments to students, and language to establish high expectations. Participants also identified struggles with moving WDP past a disciplinary move and to its intended social-emotional and culturally responsive position within the classroom in order to encourage academic risks and increased student expectations.

**Synthesis with Intervention.** WDP represents the synthesis of SEC or SEL strategies with CRT strategies. While aware of SEC, WDP also invites teachers to engage students in culturally responsive conversations and maintaining universal respect between students and teachers (Bondy et al., 2012; Ross et al., 2008; Ware, 2006). As noted above, WDP is the final stage of the professional development intervention as successful implementation is predicated upon increased educator SEC and CRT and implementation of these strategies to form meaningful relationships with students prior to the implementation of the high expectations and organized structures of WDP.

### **Chapter Discussion and Conclusion**

This chapter explored existing research within the context of the professional development theory of treatment. The chapter established existing typologies, delimitations, and paradigms of professional development to both justify the professional development intervention strategy and formulate parameters for effective professional development within the theory of treatment. The primary theoretical purpose of this literature review was to further establish the noncognitive and sociocultural aspects of the achievement gap as explored within chapter two and to explain the primary measureable variables within the research design: positive student-teacher relationships, efficacy, and emotional resilience. The primary empirical purpose of this literature review was to provide statistical-based support for the professional development theory of treatment both in the context of readers of this document and for the teacher participants within the treatment design. Finally, existing interventions such as the PATHS program, CARE program, and WDP were examined as both theoretical and empirical examples of the proposed intervention theory of treatment as well as providing models or materials for

modification within the research design. A further discussion of the theory of treatment, specifics of the intervention, and analysis plan for qualitative and quantitative data of the intervention will follow in chapter four.

## **CHAPTER FOUR**

### **METHODS**

As discussed in the literature reviews of this study, the academic achievement or opportunity gaps include cultural, social, and emotional gaps between students and educators (Boykin & Noguera, 2011; Farrington et al., 2012). Education reforms such as testing accountability have not included measurable objectives focusing on the impact of noncognitive and sociocultural factors on student performance and have not provided an applicable theory of treatment to address these indicators (Davis, Solberg, de Baca, & Hargrove Gore, 2014; Denham, Bassett, Zinsser, & Wyatt, 2014; Farrington et al. 2012). The purpose of this study was to develop effective educator professional development, guided by social-emotional competencies (SEC) and culturally responsive teaching (CRT) strategies, to better address the noncognitive and sociocultural aspects of the gaps.

This chapter will first present two visual representations of a proposed intervention focusing on increasing educator SEC and CRT including the theory of treatment as proposed by Leviton and Lipsey (2007) and a logic map. Details of the professional development treatment will then be established to provide an explicit overview of the proposed treatment. The final sections of this chapter will provide an overview of the methodology used to answer the research questions and evaluate the study in terms of reliability, fidelity, and statistical power.

#### **Theory of Treatment and Logic Model**

The theory of treatment and logic model described in this section operationalized the elements, actors, and outcomes of the research design. The theory of treatment, as proposed by Leviton and Lipsey (2007), indicates the impact of a treatment on



established variables. The logic model, as proposed by McLaughlin and Jordan (2010), operationalized theoretical and material inputs and how these inputs impact the outputs and outcomes of the research design.

### **Theory of Treatment**

A theory of treatment establishes a set of propositions regarding how the introduction of an intervention or variation in process transforms input to output variables within a research design (Leviton & Lipsey, 2007). Leviton and Lipsey (2007) identify four elements of a theory of treatment as problem definition, specification of crucial inputs, elucidation of the transformation process, and specification of expected output. A theory of treatment also provides contextual analysis of exogenous factors such as materials, human resources, or social conditions which may influence the impact of an intervention or variation in process (Leviton & Lipsey, 2007).

**Problem Definition.** The problem definition provides a logical component to the problem requiring a treatment at an elucidation greater than simple identification (Leviton & Lipsey, 2007). The problem for treatment must have a logical underpinning for why treatment is required. In the case of this research design, the problem of practice was low SEC and CRT for teachers as explored through existing literature and a needs assessment. Due to the complexities of SEC and CRT variables, this problem was operationalized to include three critical constructs in developing teachers' SEC and CRT abilities: positive student-teacher relationships, increased student efficacy, and increased student emotional resilience (Farrington et al. 2012; Hammond, 2014; Jensen, 2009). The theory of treatment for this study entered at the introductory or exploratory level with the creation of SEC and CRT professional development, with intentional focus on the three

critical constructs, which did not exist with consistency in the Mid-Atlantic district of the study. As was discussed in the literature reviews and needs assessment in this study, theoretically and empirically valid professional development has not been standardized to address the multivariate nature of the noncognitive or sociocultural impacts on the academic achievement or opportunity gaps such as poverty, community stressors, and social-emotional stressors (Farrington et al. 2012; Hammond, 2014; Jensen, 2009). This absence of participant knowledge and applicable professional development treatment were the logical underpinnings for the need for this treatment and the validity of the problem for treatment.

**Specification of Crucial Inputs.** Leviton and Lipsey (2007) propose examining inputs beyond a dependent and independent variable relationship to include specific components which elicit change in outcome variables. The first step in specification of crucial inputs for this research design was the recognition of three critical constructs to the professional development intervention: positive student-teacher relationships, increased student efficacy, and increased student emotional resilience. The crucial inputs of professional development materials were intended to increase teacher participants' perceptions of these three constructs.

Because the nature of noncognitive and sociocultural impacts are not as readily treated as curriculum or classroom management issues, a reflective and discourse-based treatment was required (Farrington et al. 2012; Hammond, 2014; Jensen, 2009). Additionally, the needs assessment of this study demonstrated a desire in educators to engage in SEC and CRT professional development but with a limited prior knowledge which required the PD design to include introductory and definitional guides to SEC and

CRT concepts. The specific professional development materials designed to impact these three constructs included a framing of SEC and CRT concepts within teacher participants' practice, application of SEC and CRT strategies, response to classroom scenarios and videos, peer discourse, and reflective journaling on both practice and student social-emotional growth. Dosage was designed as ten 45-minute sessions occurring twice monthly through the professional learning community (PLC) existing framework. This dosage was based on existing models of PD dosage and also took advantage of existing structures (PLC) to increase willingness, participation, and alignment with pre-existing work (Johnson and Fargo, 2010; Mundy et al., 2015; Sompong et al., 2015).

A challenge to the specification of crucial inputs in this research design's theory of treatment was the variability and personalization of specific strategies delivered through the PD intervention. The immediate transferability of PD to the classroom is a critical element of any PD design which is not consistently applicable to issues of SEC, CRT, mindset, and noncognitive or sociocultural issues (Farrington et al. 2012; Hammond, 2014; Jensen, 2009; Johnson and Fargo, 2010; Saderholm et al., 2016). To address this issue of immediate transferability to the classroom, PD design was grounded in individual teacher participant reflection and scenario responses to allow for a personalization and increase levels of trust and experimentation between participants and with the program materials and strategies (Bryk et al., 2010; Bryk & Schneider, 2002).

**Elucidation of the Transformation Process.** A robust description of the impacts of treatment inputs beyond a single variable is required for a complete theory of treatment (Leviton and Lipsey, 2007). Because of the difficulty in treatment for noncognitive and

sociocultural impacts, the transformation process for this research design was exploratory and based in perception over quantifiable change in student academic performance. The problem was identified not as a mitigation of noncognitive or sociocultural impacts but an increase in teacher participant perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience. A claim of transferable causality between the PD design, teacher implementation, and positive changes in student academic results could not be logically made at this time given the introductory nature of the PD design, limitations in the research scope, and the complexity of mitigating variables on a claim of causality (Leviton and Lipsey, 2007). As such, the focus on perceptive variables within the design built a framework for both expansion of the PD treatment and subsequent PD treatments to address the complexity of causality between teacher SEC and CRT actions and increases in student academic performance.

The transformation process required a mixture of perception data from teacher participants, examples of engagement in materials from the participants, measures of fidelity of implementation of the treatment, and an analysis of reflections on the importance of the PD treatment and implementation within the classroom. Perception data were quantitative through a teacher participant survey as well as qualitative through the analysis of program materials. Examples of engagement in materials and fidelity of implementation were qualitative and found in classroom observations, professional development session observations, and teacher participant reflections and session materials. Reflections on the PD treatment and implementation were found in specifically designed PD materials for teacher participants' to reflect on knowledge of materials, implementation in the classroom, and the impact of changing relationships, efficacy, and

resilience with students. While not demonstrating a causal relationships, student interviews were also include to provide a level of qualitative analysis to teacher-level data and to verify the impact identified in teacher reflections.

**Specification of Expected Output.** Defining the specific outcomes with clear attention to the logical components of the problem and nature of the inputs is a critical aspect of a theory of treatment (Leviton and Lipsey, 2007). Expected outputs also include limitations on logical outputs due to the constraints and complexities of social science treatments (Leviton and Lipsey, 2007). With the exploratory nature of this research design, expected outputs were introductory, limited, and focused on evidence of changing perceptions of the three constructs of the research design over statistically valid causal relationships between the treatment and improved student academic performance.

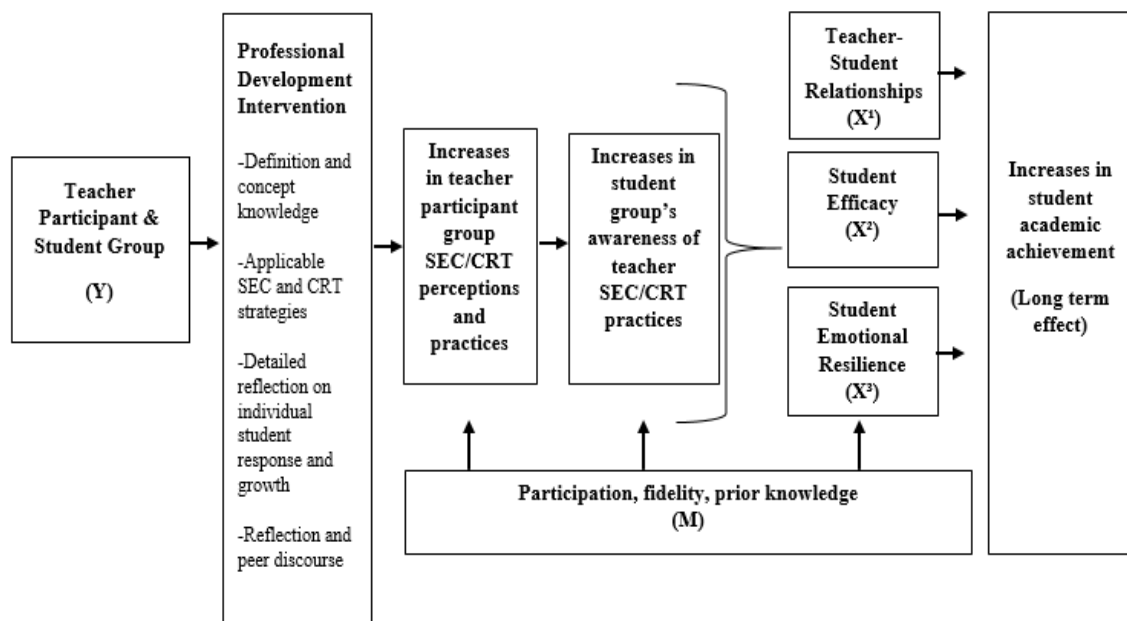
The overarching expected output to the research design was positive growth in teacher participants' perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience. Within this overarching output were specific outcome expectations found in both quantitative survey data and qualitative observational or reflection data including: recognition of the importance of the PD treatment by participants, willingness to engage in program materials, finding value in program materials, practice and implementation of materials, and reflection on the impact of implementation of materials on students. In terms of quantitative survey data, descriptive and inferential testing was used to judge output results. For qualitative observations and reflections, the analysis focused more on key recognitions of importance, experimentation, and reflection give the exploratory nature of the research design.

**Moderating Variables.** Moderating variables of the professional development intervention may have impacted the quality and fidelity at which the professional development treatment was implemented. Leviton and Lipsey's (2007) critique of the black box theory addresses the complexities of social science treatments applied to this research design in that subjective and outside moderating variables had the potential to alter treatment results. These moderating variables included: (1) participant engagement in professional development materials, (2) proper implementation of the professional development programming in terms of adherence to program and correct delivery of materials by program facilitators, and (3) varying prior knowledge of professional development materials. The discussion of fidelity and validity later in this chapter will address these moderating variables.

**Theory of Treatment Model.** To explain the theory of treatment, a diagram based on Leviton and Lipsey (2007) has been included as Figure 3 below.

Figure 3

*Theory of Treatment Model*



In the case of this research design, these dependent variables were identified as the teacher participants' increased skills in forming positive student-teacher relationships, increasing student efficacy, and increasing student emotional resilience. As was explored in both chapters one and three of this study, these variables are part of a larger theoretical and contextual framework of social-emotional and culturally responsive supporters or strategies aimed at impacting achievement gaps propagated by noncognitive or sociocultural factors (Banks, 2015; Boykin & Noguera, 2011; Chamber & McCready, 2011; Hammond, 2014; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Ware, 2006; Zins, 2000). For the operationalization of both the professional development intervention and research design, these three variables were referred to as constructs because they represented amalgamations of theoretical and contextual concepts as well as to align the language of the research design better to language appropriate for actionable professional development. The professional development intervention was the independent variable within the theory of treatment to facilitate any perceptual change regarding SEC and CRT knowledge in the participant teacher group and student group.

**Hypothesis.** The hypothesis for the research design was increased professional development in SEC and CRT practices will improve participant teachers' perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience within a teacher participant group made up of members of two English content area professional learning communities (PLCs). The long term goal, not directly addressed in the study and proposed as an area for future study, theorized that increases in these SEC and CRT strategies by teachers would help mitigate the negative effects of the

noncognitive and sociocultural aspects of the achievement gap such as poverty, community stressors, and substance abuse issues by improving students' positive views of support within the classroom, increased engagement in the school culture and community, and the formation of meaningful relationships within the school (Boykin & Noguera, 2011; Gay, 2014; Hammond, 2014; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Ware, 2006). Increasing educator SEC and abilities to mitigate the neurological and sociocultural impacts on student performance by creating classroom supports and lessons often missing through curriculum and academic interventions only (Civic Enterprises et al., 2013; Farrington et al., 2012; Hammond, 2014; Hanson, 2013; Jensen, 2009). Hammond (2014) and Hanson (2013) identify these neurological impacts as decreased attention span, elevated levels of cortisol and aggression, and reduction in memory retention and critical thinking skills. Farrington, et al (2012) and Jensen (2009) identify these sociocultural impacts as resistance to engagement in school community, fractured relationships with staff and peers, and cultural isolation due to both relationships and curriculum.

This study served as an initial example of the type of PD focused on educator SEC and application within the classroom but did not include the needed areas of study of causality to student performance needed to test any impact on this long term goal. Rather, this study examined the impact of the PD on teacher participants changing knowledge and perceptions of SEC, beginning implementations of strategies, and reflections on concepts and strategies.

To test the hypothesis, a treatment of professional development sessions focusing on SEC and CRT strategies was provided to a focus group of twelve 9th and 10th grade



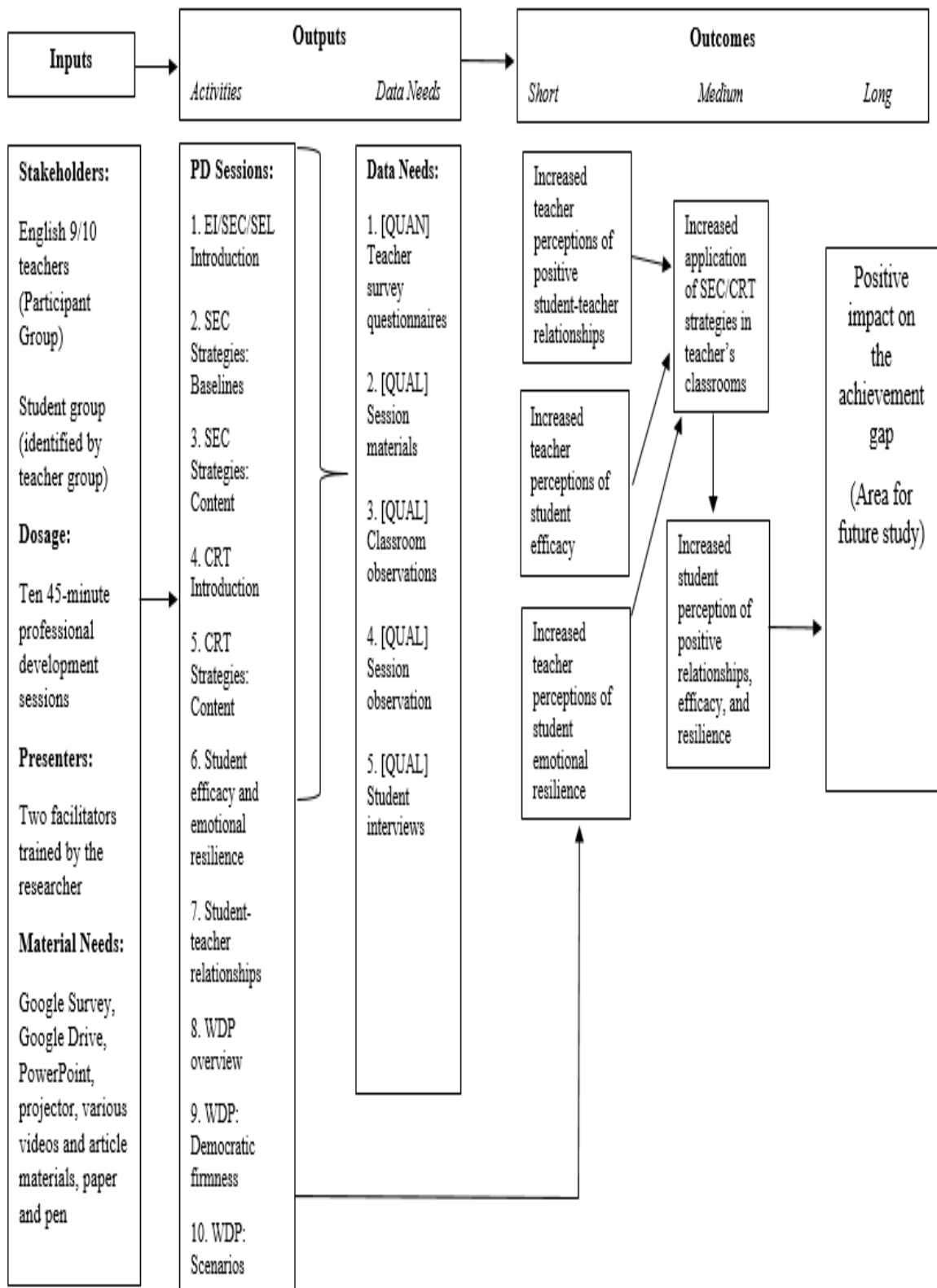
English and special education teachers. This professional development was delivered through the 9th and 10th grade PLCs by designated program facilitators. Professional development materials were developed by the researcher based on the existing professional development programs of Promoting Alternative Thinking Strategies (PATHS) (Kam et al., 2004), Cultivating Awareness and Resilience in Education (CARE) (Jennings et al., 2014), and Warm Demander Pedagogy (WDP) (Bondy et al., 2012). Measurements were collected through a convergent parallel mixed methods design (Creswell & Plano Clark, 2011). The quantitative outputs were pre-test and post-test survey questionnaires given to the participant teacher group. The qualitative outputs were pre-intervention and post-intervention observations, an intervention session observation, program artifacts such as journal entries or session reflection activities, and student interviews conducted by a third party interviewer at the conclusion of the professional development sessions.

### **Logic Model**

The logic model for the research design identified three typologies for analyzing and measuring the intervention treatment's interrelationships. These typologies included inputs, outputs, and outcomes. The logic model below was based on the model design of McLaughlin and Jordan (2010) and was a guide to the intervention design as well as answers to the research questions and the evaluation question. The logic model is included below as figure 4.

Figure 4

*Logic Model*



## **Intervention Overview**

As discussed in the literature reviews in chapters one and three, the reasoning behind the existence of the achievement or opportunity gaps for students was multifaceted and involved sociological, psychological, and political contexts which defined the barriers and gaps between student racial groups (Carey, 2014). The proposed intervention involved professional development which extended beyond academic and pedagogical interventions and into the noncognitive and socio-cultural aspects of the achievement or opportunity gaps such as poverty, social-emotional stressors, and community stressors. Within the intervention were three main constructs explored throughout the professional development sessions: positive student-teacher relationships, increased student efficacy, and increased student emotional resilience.

Positive student-teacher relationships increase positive engagements in school culture and decrease the neurological and sociocultural impacts of outsider stressors such as poverty or community violence (Boykin & Noguera, 2011; Hammond, 2014; Jensen, 2009; Ware, 2006). Positive student-teacher relationships mitigate these noncognitive or sociocultural stressors through a combination of increasing feelings of community and acceptance within the classroom and decreasing fear, anxiety, or reluctance regarding engaging in the classroom (Hammond, 2014; Jensen, 2009). The professional development intervention focused on providing teacher participants with strategies and mindset reflection to increase the formation of these positive relationships and decrease the variability in the relationships.

Increased student efficacy evolves positive student-teacher relationships to an academic or pedagogical level. This evolution of relationships to efficacy occurs through

the transference of expectations from the teacher participant to students (Farrington et al., 2012; Gay, 2010; Hammond, 2014; McMahon et al., 2011; Purdie et al., 1996; Ware, 2006). Student learning which is impacted by noncognitive or sociocultural stressors results in lowered retention of materials, lowered sense of self satisfaction, and increased reluctance to engage in the classroom community (Boykin & Noguera, 2011; Farrington et al., 2012; Gay, 2010; Hammond, 2014; Ladson-Billings, 1995; Ladson-Billings, 2002; Ware, 2006). The professional development intervention provided teacher participants with strategies to build student efficacy and recognition of increases in this efficacy to increase the engage in the classroom community and curriculum materials.

Increased student emotional resilience is the primary strategy at mitigating the effects of noncognitive and sociocultural stressors through the development of specific coping strategies within impacted students (Civic Enterprises et al., 2013; Farrington et al., 2012; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Zins, 2000). Building upon increased positive relationships and efficacy, increased emotional resilience extends beyond classroom community and curriculum to provide coping skills for impacted students within the source of the stressors (Civic Enterprises et al., 2013; Farrington et al., 2012; Jensen, 2009; Jones & Bouffard, 2012; Zins, 2000). Within the classroom, increasing teacher participants abilities to promote student emotional resilience decreases neurological (increased cortisol, aggression, reluctance) and pedagogical impacts and provides for a classroom of increased critical thinking (Elksnin & Elksnin, 2003; Farrington et al., 2012; Hammond, 2014; Jones & Bouffard, 2012; Ware, 2006). The professional development intervention provided teacher participants with strategies to

build student emotional resilience to increase student engagement and reduce the impact of outside stressors on the learning process.

### **Existing Interventions Framework**

To align the professional development theory of treatment to existing interventions, three existing interventions similar to the theory of treatment were contextualized. The first study was Kam et al.'s (2004) application of the Promoting Alternative Thinking Strategies (PATHS) study which connects to the efficacy construct. The second study was Jennings et al.'s (2014) application of the Cultivating Awareness and Resilience in Education (CARE) program which connects to the resiliency construct. The final study was Bondy et al.'s (2012) implementation of Warm Demander Pedagogy (WDP) which connects to the student-teacher relationship construct. Although this section identifies specific existing interventions connected to a specific construct, an important note is that elements of each construct may appear in multiple existing interventions with a specific focus on the relationship construct within each existing intervention. These studies were explored in depth in chapter three but are contextualized below as foundational to the development of the professional development intervention applied in this study.

**Promoting Alternative Thinking Strategies (PATHS).** PATHS is a development curriculum for teachers with a focus on promoting students' emotional development, self-regulation, and social problem-solving skills (Greenberg & Kusche, 1993; Kam et al. 2004). Kam et al. (2004) identified three variables for study within implementation of the PATHS program: (1) student emotional development, (2) student self-regulation, and (3) student social-problem-solving skills.

PATHS supported the increasing student efficacy construct within this research design. Building upon Bandura's (1977) mechanisms of efficacy change, PATHS' goal is to provide increased efficacy expectations to promote increased efficacy outcomes. PATHS' strategies include direct modeling by the teacher of efficacy performance accomplishments through the teacher's own actions of reflection regarding abilities and mindset. PATHS also promotes frequent, impromptu, and formal/informal vicarious experience modeling by prompting students in classroom situations to reflect on feelings of efficacy and accomplishment. The primary mechanism of efficacy change within PATHS is verbal persuasion and a connection between increased efficacy strategies and mindset in the classroom. Aligned with Bandura's (1977) suggestion and exhortation modes of efficacy expectations, PATHS focuses teachers' classroom lexicons, gestures, and interactions around formalized increases in efficacy promotion (specific phrasing, content connections, lesson design) and frequent and informal interactions with students to identify needed areas of student efficacy and to increase efficacy.

Within the professional development theory of treatment, the PATHS intervention provided the explicit SEC and SEL sessions to frame and operationalize strategies for the teacher participant group with a focus on classroom and interpersonal strategies targeting student academic efficacy and problem-solving. These specific strategies included teacher developed written reflection for students, increasing teacher's abilities to recognize student emotional baselines, and informing teachers on how to recognize socio-ecological validity in student issues brought into the classroom from outside the classroom (Greenberg & Kusche, 1993; Kam et al., 2004; Ransford et al., 2009).

**Cultivating Awareness and Resilience in Education (CARE).** Similar to Kam et al. (2004), Jennings et al. (2014) both defined SEC within the context of teacher education and provided empirical evidence of the success of a SEC treatment intervention on student academic performance. The SEC development and growth of teachers was significant to the development and maintenance of positive student-teacher relationships, effective classroom management, and the promotion of SEL classroom climate factors such as academic efficacy and emotional resilience (Jennings et al., 2014). The primary focus of professional development within CARE was the development of social-emotional strategies by teachers to promote academic and emotional resilience in students.

Similar to the social-emotional strategies promoted by Civic Enterprises et al. (2013), Elksnin and Elksnin (2003), Jennings and Greenberg (2008), and Zins (2000), CARE focuses teacher strategies in verbal interactions and active listening and discourse. Increased verbal interactions with students are both formal and informal opportunities for teachers to gauge emotional baselines and recognize when emotional baselines are elevated. Building upon verbal interactions, teachers then institute strategies such as de-escalation conversations, walkabouts, or reflective questions to build emotional resilience and return to emotional baselines. Active listening and discourse provides teachers with both content and lesson focus (connecting lessons to emotional factors, content journaling to improve writing, or discussion of emotions as part of critical thinking discourse) and increased opportunities to build relationships with students to prompt exploration of emotional baselines and emotional responses to behaviors such as reluctance or disciplinary infractions.

**Warm Demander Pedagogy (WDP).** To move the intervention towards sustained, practical application and providing teacher participants with skills at forming positive student-teacher relationships, WDP was applied as an application strategy in the final sessions of the intervention. WDP focused on specific strategies such as organizing classrooms for shared inquiry and accountability, developing student self-regulation skills, and developing democratic classroom rules through a lens of cultural responsiveness and social-emotional competencies (Bondy et al., 2012; Kleinfeld, 1972; Ross et al., 2008; Ware, 2006). WDP served as a culminating series of strategies after participants engaged in foundational strategies in building teacher SEC and CRT. WDP strategies were applied from Bondy et al.'s (2012) application of WDP lessons with a focus on sustained structures, behavior responses, and increased expectations through increased student efficacy.

Of the existing interventions, WDP represents the most actionable in terms of clearly designed actions and structures within the classroom. Sustained structures such as verbal queues, reflective questioning, and designed word choice are implemented as standard and daily structures within a WDP classroom (Bondy et al., 2012; Ross et al., 2008; Ware, 2006). The development of highly tuned student-teacher relationships functions as both efficacy expectation and disciplinary infraction mitigation by affirming a growth mindset and resiliency within student-teacher relationships (Bandura, 1977; Bondy et al., 2012; Ross et al., 2008; Ware, 2006). As opposed to specific, singular strategies, WDP is an ongoing, evolving, and consistent strategy for the development of whole classroom climate and expectations.



## **Intervention Delivery**

For the SEC and CRT professional development intervention, three participant groups were involved in implementing or receiving the intervention. These groups included: program facilitators, teachers, and students.

**Program Facilitators.** The program facilitators were the primary implementers of the professional development treatment. For this intervention, there were two program facilitators: the lead teacher of the 9<sup>th</sup> grade English PLC and the leader teacher of the 10<sup>th</sup> grade English PLC. The 9<sup>th</sup> grade English PLC facilitator self-identified as a White female with 31 years of teaching experience. She also was the department chair for the English department. The 10<sup>th</sup> grade English PLC facilitator self-identified as a White male with 19 years of teaching experience. These demographic data were captured in conversations between the researcher and the program facilitator prior to the beginning of the intervention.

The program facilitators worked directly with the researcher throughout the intervention timeline. The researcher met directly with the program facilitators, provided intervention materials directly to the program facilitators, and coached the program facilitators on proper implementation of intervention materials. These meetings also included collaborative meetings with both facilitators to ensure calibration and uniformity among the implementation of the professional development program. The program facilitators met with the researcher prior to each professional development session to review intervention materials and were also provided all materials for all professional development sessions electronically in advance through the use of a Google drive folder.

In addition to in person meetings with the researcher, continued dialogue occurred electronically through Google drive comments and e-mails.

As members of the English PLCs and classroom teachers, the program facilitators participated in the implementation of strategies within her or his own classroom, but did not take part in the quantitative survey data and no qualitative data were gathered from the facilitators. The program facilitators assisted in gathering qualitative materials, most notably the collection of materials from the professional development sessions, and also provided reminders to participants to take the post-test survey at the conclusion of the professional development sessions. Although they did not participate in data gathering, the program facilitators completed internal review board approved consent forms provided to the other adult participants so they were aware of safety and withdrawal protocols for both the program and for their own participation.

**Teachers.** Classroom teachers were the primary recipients of the professional development treatment and implemented strategies within their classrooms. Evaluation of success of the intervention included both qualitative and quantitative measures of the quality of the teachers' implementation and self-reported perceptions of the outcome evaluation data measures of increased perceptions of student-teacher relationships, student efficacy, and student emotional resilience. The participant teacher group included the combined members of the 9th and 10th grade English PLCs. The sample size for the participant teacher group was 12 English and special education teachers. For the purpose of data collection, the groups were blended together although they did receive the intervention at different times and from different facilitators. The leader of the 9th grade English PLC facilitated the program for members of that corresponding PLC and the

same for the 10th grade PLC. Of the 12 participants, two participants were on both PLCs and elected to attend the 10th grade implementation of the trainings. While facilitators differed between the two groups, the researcher met with both facilitators together and all electronic communication contained both facilitators. Additionally, dosage and materials did not vary between the two groups.

The demographics for the teacher participant group was 12 teachers with 10 English classroom teachers and two special education English content co-teachers. Five participants were members of the 9th grade English PLC and seven participants were members of the 10th grade PLC. All teacher participants self-identified as White with nine members of the participant group self-identified as female and three self-identified as male. Four participants self-identified as in the age range of 46-59 years old and 8 self-identified as in the age range of 36-45 years old. The *M* for self-identified years of teaching experience was 18.65 with a minimum years of experience of seven years and a maximum of 32.

**Students.** Students were the recipients of the proposed improved teacher SEC during and following the intervention. While limitations within the study and measuring student data existed, a preliminary evaluation of the impact of the intervention on students was gathered through student interviews.

The students interviewed were self-identified by the teacher participants. Latitude was provided to the teacher participants to self-identify students to focus on as to embed further journal entries and materials around working with this specific student and to further promote the professional development sessions as authentic and immediately applicable to the classroom (Guskey, 2000; Sztajn, 2011). The process of selection of the

students was embedded into the training materials within the second session. Teacher participants were asked to write a journal entry on a specific student who fits characteristics of a need for the social-emotional competencies information provided during the session. These characteristics were identified in the session materials as academically struggling, quiet or reserved with minimal interactions with staff or students, behavioral or impulse concerns, or concerns with interactions with the parents or guardians. Teacher participants were asked to identify only one student to focus on as to minimize additional work burdens on the teacher participants as each participant was participating in both this study's professional development sessions and larger school and district-based professional developments. While maintaining a focus on intervention objective and goals, this study also recognized the logistical challenges of asking classroom teachers to participate in an additional professional development session outside of required professional development so a focus was placed on minimizing additional work and journaling as to provide increased focus on one student in a low-risk and collaborative environment focused more on student achievement and intervention than increased workload for teachers (Bryk et al., 2010; Johnson et al., 2007; Johnson & Fargo, 2010).

The desired sample size for the student group was 12 students as one student was identified by each teacher participant. One teacher participant was asked to identify another student as she had chosen the same student as another teacher. The final sample size for the student group was 11 students as one member of the teacher participant group requested to not have their student selection interviewed under concerns that selected students would hold negative views of being selected. The teacher participant met with

the researcher and shared their concerns in person. The teacher participant was initially asked if they wish to withdraw from the research study but declined. The teacher participant wanted to participate in the professional development sessions, complete all quantitative and qualitative data, and reflect through journal entries their work with the selected student but did not want the student interviewed at the conclusion. Upon conversation with the teacher participant, the request to participate in all aspects of the professional development except for the student interview was granted.

The demographic information for the student participant group was 11 students. Six students were grade 10 students and five students were grade nine students. Demographic information regarding the student group was based on student's school profiles. Four students were female and seven students were male. Six students were African American, four students were Hispanic, and one student was White. Four students were 14 years old, six students were 15 years old, and one student was 16 years old. The *M* grade point average (GPA) for the student group at the time of the intervention implementation was 1.78 on a 4.0 scale. This GPA *M* indicated the student group was below the 2.0 measure for academic eligibility for extracurricular activities stated by the district. Academic eligibility is a district measure for student success often incorporated into school and district improvement plans. All students were within original year of graduation (OYG), or in the age appropriate grade level, except for one student who was one year behind in OYG ranking.

### **Intended Activities**

The intended activities centered on professional development sessions for a group of teachers in the English content PLCs. The professional development sessions were

provided to the program facilitators to implement within existing PLC meeting structures. As discussed in chapter three, Mundy et al. (2015) found no significant impact on teacher satisfaction or implementation within the method of delivery of professional development and focused on the frequency and quality of the professional development. Mundy et al. (2015) compared professional development delivered through a PLC model with other types of delivery such as pre-service, one-shot, or after-school demonstration. Using a Kruskal-Wallis and Friedman statistical tests, Mundy et al. (2015) indicated no significant value added to the delivery method of the professional development (Kruskal-Wallis  $X^2= 14.82, p = .011$ ), but did find importance in the frequency of the professional development and an impact on teacher satisfaction. The PLC model provided sustained and routine dosage of the professional development treatment as meetings are pre-scheduled and conformed to an established structure (Johnson & Fargo, 2010; Sparks & Many, 2015).

There were a total of ten, forty-five minute long professional development sessions over a period of five months which ran parallel with classroom implementation. Session descriptions are found below in Table 9. These descriptions include the session number, general topic, session objective, activities, and session artifacts. Additionally, a timeline for implementations was included as Appendix B.

Table 9

*Outline of Professional Development Session Topics*

Session	General Topic	Session Objectives	Activities	Session Materials
One	Introduction to SEC and Overview	Participants will be able to define SEC; identify key characteristics of SEC; identify challenges to students' social-emotional wellbeing.	Whole program overview  Mini-lesson: Define SEC  Prompt discussion: challenges to students' social-emotional wellbeing	Notes sheet: identifying challenges to students' social-emotional wellbeing  Exit card: key EI/SEC/SEL concepts
Two	SEC Strategies: Emotional baselines and Proactive/Reactive Support	Participants will be able to apply student emotional baselines strategies; apply strategies for reactive social and emotional supports.	Bottle Pop activity of passing a bottle of soda by participants. The bottle represents a student with each shake being an emotional stressor a student. The last participant is asked if they wish to open the bottle.  Mini-lesson: Identifying student baselines and applying proactive and reactive supports (tone, question asking, non-judgement, and fairness)	Capture sheet: Applying emotional baselines and reactive supports  Journal entry indicating use of baseline or reactive strategy by the following session.
Three	SEC Strategies: Social and Emotional Content	Participants will be able to apply social-emotional strategies to English content instruction	Video study: Boston 24/7 Discussion of baseline/reactive journals  Mini-lesson: Social-emotional Content Strategies	Journal entry indicating reflection on SEC content lesson and success or areas for growth for the next session
Four	CRT: Introduction and Fact Finding	Participants will be able to define CRT; identify his or her own cultural identity or map; identify challenges to culturally responsive classrooms.	S-E content journal entry review  Mini-lesson: Introduction to CRT  Activity: cultural identity map	Cultural identity map
Five	CRT: Culturally Relevant Content and Instruction	Participants will be able to apply specific CRT strategies to content instruction.	Mini-lesson: CRT strategies and content instruction  Development of a CRT focused lesson	CRT focus lesson Journal entry: implementation and reflection on CRT focused lesson

Table 9

*Outline of Professional Development Session Topics (cont.)*

Session	General Topic	Session Objectives	Activities	Session Materials
Six	Building Student Efficacy and Emotional Resilience: A Synthesis Approach	Participants will be able to apply specific strategies for building students' sense of ability; apply specific strategies for supporting students in emotional resilience from academic and social perspectives	CRT lesson journal review  Mini-lesson: Efficacy and emotional resilience  Scenario response: raising efficacy and emotional resilience	Scenario response notes  Journal entry: reflection on student efficacy or emotional resilience
Seven	Building Social-Emotional and Culturally Responsive Student Relationships	Participants will be able to identify socially-emotionally and culturally responsive relationships; apply strategies for building positive student-teacher relationships	Efficacy and resilience journal entry discussion  Scenario: positive and negative student-teacher relationships  Activity: identifying challenges to student-teacher relationships	Identifying challenges to relationships notes sheet  Journal entry: reflection on a positive or negative student-teacher relationships for next session
Eight	WDP: Overview and Structures	Participants will be able to identify characteristics of WDP; apply preliminary WDP structures and routines.	Relationship journal review  Mini-lesson: WDP structures and routines	Exit card: key elements of WDP  Journal entry: reflection on application WDP structure
Nine	WDP: Democratic Firmness	Participants will be able to identify characteristics of democratic firmness; apply democratic firmness to classroom routines and relationships.	WDP structures journal entry review  Mini-lesson: democratic firmness  Video: Marcos Torres & Democratic Classrooms	Democratic classrooms video notes sheet  Journal entry: reflection on an instance of democratic firmness
Ten	WDP: Scenarios and Best Practices	Participants will be able to respond to WDP scenarios; apply WDP practices to a whole classroom model.	Democratic firmness journal review  Positive WDP scenario  Negative WDP scenario  WDP Exit discussion	WDP Scenario capture sheets  WDP Exit discussion card

**Preliminary Actions.** A preliminary session involved a meeting between the researcher and the program facilitators to review professional development learning progressions, measurement, and evaluation. During this preliminary session, the



researcher presented pre-designed intervention professional development materials created by the researcher with a focus on keeping the sessions dynamic, discourse and collective discussion based, and applicable to immediate classroom implementation (Bryk et al., 2010; Johnson & Fargo, 2010; Mundy et al., 2015; Saderholm et al., 2016).

**Social-Emotional Competencies Sessions.** Sessions one, two, and three focused on frameworks and strategies directly related to teacher SEC. The objectives of these sessions were to provide a theoretical and contextual framework in SEC concepts and provided discourse-based inquiry into challenges and strategies in increasing participant SEC. The shared inquiry model of these sessions was designed to foster a development network and provide sustained classroom applications throughout the initial sessions (Bryk et al., 2010; Bryk & Schneider, 2002; Johnson & Fargo, 2010; Mundy et al., 2015). Additionally, scenario-based discussion was included to further reflective practices on the professional development and build communal conversations around the professional development topic (Bryk et al., 2010).

The theoretical and contextual framework for the SEC sessions helped establish clear frameworks and synthesis between frameworks and application. These frameworks included connections to neuroeducation and the role of cognitive function and social-emotional stressors to provide clear and empirical research-based evidence of the role of social-emotional issues and learning (Goleman, 1995; Hackman et al., 2010; Hanson, 2013; Salovey, Mayer, & Caruso, 2002). Explicit synthesis between social-emotional theoretical and contextual concepts and classroom application guided all three SEC sessions. These concepts to strategies were focused on emotional baseline analysis (Lopes & Salovey, 2004; Salovey et al. 2004; Zins et al., 2000), self-regulatory activities

(Pintrich & De Groot, 1990; Purdie et al., 1996), emotional resiliency strategies (Greenberg et al., 2003; Lopes & Salovey, 2004; Merrell & Gueldner, 2010), and student efficacy (Bandura, 1977; Fast et al., 2010).

**Culturally Responsive Teaching Sessions.** The second content section, comprised of sessions four and five, focused on the theoretical, contextual, and applicable CRT strategies. Like the SEC sessions, the CRT sessions were based around networked development and shared inquiry with an immediate classroom application goal (Bryk et al., 2010; Bryk & Schneider, 2002; Johnson & Fargo, 2010; Mundy et al., 2015). Based on qualitative feedback from the needs assessment of this study, care was taken as to not create divisions or rejection of the treatment in difficult discussions of race and cultural identity. A major activator activity in this section was the formation of cultural identity map to encourage discussion around culturally responsiveness (Banks, 2015; Gay, 2010).

The session introduced CRT at a definitional level (Ladson-Billings, 1995, 2002; Gay, 2010) as well as provided neurological connections between cultural unresponsiveness and delayed cognitive effects (Hammond, 2015). The sessions concluded with both specific CRT strategies to increase student-teacher relationships and embedded culturally responsive pedagogy within curricular materials (Ladson-Billings, 1995; 2002; Gay, 2010) as well as provided a role-playing opportunity for PLC team members to identify psychological and sociocultural barriers to success experienced by students.

**Critical Constructs Sessions.** The critical variables sessions, which comprised sessions six and seven, delved more deeply into the three constructs of the research design: positive teacher-student relationships, student efficacy, and student emotional

resilience. While embedded throughout the SEC and CRT sessions and identified and defined in the first session, the critical variable sessions explicitly reviewed strategies and scenarios for increasing participant understanding of the three variables. These sessions were provided purposefully before the final WDP sessions to strength participant understandings of the critical frameworks before moving strictly into application strategies.

**Warm Demander Pedagogy.** The final grouping of sessions, which comprised of sessions eight, nine, and ten, focused specifically on developing participants' knowledge base and strategies within WDP. Activities during these sessions contained information on developing explicit lesson plans and reflections on application of SEC and CRT strategies through the lens of WDP. These sessions were design purposefully to be the exit point for the intervention because of the application value of these sessions as well as the need for SEC and CRT prior knowledge before implementation of WDP strategies (Ware, 2006).

The theoretical and contextual framework for the final sessions centered on WDP strategies. A goal of the WDP sessions was to synthesize SEC and CRT strategies with explicit classroom management and curricular foci (Bondy et al., 2012; McCombs, 1994; Ross et al., 2008; Ware, 2002). Warm demander pedagogy provided the most actionable of all strategies as it provided explicit, culturally relevant strategies for classrooms including room arrangement, student calling patterns, and responses to students moving beyond emotional baselines through a lens of cultural proficiency and SEC strategies (Bondy et al., 2012; Ross et al., 2008).

Throughout all sessions, a primary aspect of the theory of treatment of the PD intervention was consistent reflection on the definitional, theoretical, and application of specific strategies to increase the teacher participants' understanding and interaction with the three constructs of the research design (positive student-teacher relationships, student efficacy, and student emotional resilience). Specific intervention activities such as journal reflections and responses to session materials were established to both capture teacher participant reflections and evaluate the level of engagement and implementation of strategies within the classroom.

### **Research Questions**

For the research design, two questions were developed. The research questions included:

1. What was the impact of a social-emotional competencies and culturally responsive teaching professional development intervention on teachers' perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience?
2. What was the impact on students selected by teacher participant's understanding of and ability to provide examples of positive student relationships, student efficacy, and student emotional resilience?

For the research design, one evaluation questions to measure fidelity of implementation was developed. The evaluation question included:

1. To what degree did teacher participants interact with and contribute to a professional development intervention focusing on increasing social-emotional competencies and culturally responsive teaching?

### **Analysis and Evaluation Methodology**

The treatment focused on providing educators with professional development in social and emotional competencies (SEC) and culturally relevant teaching (CRT) strategies. With increased SEC and CRT, educators were provided with strategies to address student issues that were beyond the curriculum and impacted academic achievement (Civic Enterprises et al., 2013; Jennings & Greenberg, 2008; Ransford et al., 2009). These issues included the noncognitive and sociocultural aspects of the achievement gap, such as poverty, family structures, abuse, and community violence (Farrington et al., 2012; Jensen, 2009; Maring & Koblinsky, 2013).

Short term impacts for the intervention were improvements in the teacher participant groups' knowledge and perceptions of SEC and CRT topics with a focus on the three constructs: positive student-teacher relationships, student efficacy, and student emotional resilience as measured through quantitative questionnaire survey data and qualitative observational and program materials data (Civic Enterprises et al., 2013; Farrington et al., 2012; Jennings & Greenberg, 2008). These short term impacts were the primary measurable conclusions of this study. Intermediate impacts for the intervention included inductive qualitative evidence from student interviews as to measure student recognition of the teacher participant groups' increased perceptions of the three constructs of the study. While measured in this study, intermediate impacts of students were also identified as an area for future research. Long term impacts, which were not measured within this research design and will be areas for future study, included academic improvements for students based in increased educator SEC and CRT implemented strategies.

## **Research Hypotheses**

The hypothesis for the research design was PD in SEC and CRT practices for teachers would improve the participant teacher groups' self-reported perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience in comparison of a matched pairs pre-test and post-test survey convergent with qualitative observation and program materials data. A secondary hypothesis, tested through limited qualitative student interview data, was PD in SEC and CRT practices for teachers will be visible in students' perceptions of the three constructs as measured through qualitative student interview data.

## **Mixed Methods Design and Justification**

Due to the limited sample and effect size for both the teacher participant and students groups, a mixed methods approach was required to provide additional observable data to the quantitative data. The research was designed through a convergent parallel mixed methods approach. The rationale behind the convergent parallel method was that complimentary data on the same topic were required and to provide overlapping support of quantitative data with qualitative data (Creswell & Plano Clark, 2011). The limited statistical power and sample size of the study, required that parallel qualitative data be collected to both support any quantitative conclusions as well as expand the impact past a mono-operational bias of only one survey qualitative measure (Creswell & Plano Clark, 2011; Shadish et al., 2002). Additionally, a convergent parallel design was used to provide measures of fidelity of implementation of the treatment program through qualitative data collection.

**Convergent Parallel Mixed Method Design.** Creswell and Plano Clark (2011) identified a convergent parallel design as a collection of both quantitative and qualitative data with overlapping quantitative and qualitative strands on a single topic. These parallel data support conclusions regarding multiple data strands or enhance limited data within one strand. In the case of this research design, qualitative data were analyzed to both support and enhance conclusions based on limited, mono-operational quantitative data. In the case of the teacher participant group, qualitative observation of classroom behaviors connected to the participant teacher group's quantitative survey data which provided additional validity to the both the quantitative and qualitative data.

**Qualitative Data as Fidelity Measures.** In addition to supporting the quantitative evaluation design, the qualitative strands within the embedded design supported issues of validity and fidelity of implementation of the professional development treatment (Dusenbury, Brannigan, Falco, & Hansen, 2003). Through an observation tool, a neutral observer captured if the critical elements of the professional development treatment were being implemented within both the participant teacher group's classrooms and within professional development sessions. As a pilot study with opportunities for replication or expansion, these fidelity measures were critical to ensure the pilot intervention professional development program was able to be implemented as designed and with minimal alterations, concerns from participants, or flaws within implementation design (Dusenbury et al., 2003).

### **Outcome Results Design**

This section contains details of how the outcome results of this study were analyzed. The purpose of the analyses were to answer the research questions as well as

test for the reliability and fidelity of the professional development intervention if replication or alterations in future studies are to occur. Results were gathered both quantitatively and qualitatively. Analysis was conducted through a convergent mixed methods design (Creswell & Plano Clark, 2011). Quantitative data were presented through descriptive and inferential analyses. Qualitative data were analyzed through either emergent or inductive coding or a hybrid of both methods. Both the quantitative and qualitative aspects were analyzed together as connected to the research and evaluation questions. A table of the relationships between the quantitative and qualitative aspects and the research and evaluation questions is below in Table 10.

Table 10

*Data Collection Matrix*

Indicator	Research Question Addressed	Data Source(s)	Frequency	Responsibility
Increased teacher participant group's perceptions of SEC/CRT constructs of positive student-teacher relationships, student efficacy, and student emotional resilience.	RQ#1	[QUAN] Teacher participant group questionnaire survey.  Measured by:  Descriptive ( <i>M</i> , <i>SD</i> , <i>Sk</i> , <i>K</i> )  Inferential (MANCOVA)  Coefficienty (Cronbach's Alpha)	Twice measured; pre-test and post-test	Researcher
Qualitative classroom observations of teacher participant group regarding increased perceptions of SEC/CRT constructs of positive student-teacher relationships, student efficacy, and student emotional resilience and evidence of implementation of strategies.	RQ#1 EQ#1	[QUAL] Direct observation of teacher group by program facilitators.  Pre-coding and emergent hybrid and deductive analysis	Twice measured; before and after intervention	Neutral observers  Researcher (coding and analysis)



Table 10

*Data Collection Matrix (cont.)*

Indicator	Research Question Addressed	Data Source(s)	Frequency	Responsibility
Qualitative classroom observations of teacher participant group regarding increased perceptions of SEC/CRT constructs of positive student-teacher relationships, student efficacy, and student emotional resilience and evidence of implementation of strategies.	RQ#1	[QUAL] Direct observation of teacher group by program facilitators.	Twice measured; before and after intervention	Neutral observers
	EQ#1	Pre-coding and emergent hybrid and deductive analysis		Researcher (coding and analysis)
Qualitative collection of program materials including notes sheets, exit cards, and journal prompts completed by teacher group.	RQ#1	[QUAL] Teacher group materials completed during sessions as collected by program facilitators.	Reoccurring throughout intervention; final coding after intervention	Program facilitators
	EQ#1	Emergent coding and inductive analysis provided by researcher.		Researcher (coding and analysis)
Qualitative interviews with student group identified by teacher participant group regarding positive student-teacher relationships, student efficacy, and student emotional resilience.	RQ#2	[QUAL] Interview of student group by a third party interviewer.  Pre-coding-emergent hybrid and deductive analysis provided by researcher.	One measure; after intervention	Interviewer  Researcher (coding and analysis)

**Evaluation of Professional Development**

To frame the outcome evaluation of the research design, two studies on effective evaluation of professional development were used: Guskey's (2000) five critical levels of professional development evaluation and Sztajn's (2011) evaluation of processes and outcomes. Both of these studies were explored within the chapter four literature review of

this study. These studies formed a research framework for the qualitative and quantitative data to be collected and analysis through the process of outcome evaluation.

A common model for professional development evaluation, Guskey's (2000) five critical levels of professional development evaluation focus on both participant and student outcomes. Guskey (2000) identifies the five critical levels as (1) participants' reactions, (2) participants' learning, (3) organization support and change, (4) participants' use of new knowledge or skills, and (5) student learning outcomes. Participant's reactions, learning, and use of new knowledge and skills were measured through both the quantitative survey questionnaire data and qualitative observation, interview, and session artifacts data.

### **Quantitative Matched Pair Design**

To provide evidence related to the research questions and evidence towards the hypothesis, a matched pairs design was used to analyze variance between the teacher participant group's pre-test and post-test surveys. Survey responses were matched using the response variable of number of years teaching as an anonymous identifier. There were no conflicts in this variable requiring a secondary variable. The purpose of the matched pair design was to simulate an experimental (post-test) with a counterfactual (pre-test) condition as evidence of growth within the teacher participant group (Shadish et al., 2002).

**Survey Design.** Survey design for the teacher participant group required a synthesis of existing surveys was used to measure the three constructs of the research design. These constructs and the matching survey were: teacher-student relationships matched with Pianta's (1999) Student Teacher Relationship Scale (STRS) student

efficacy matched with Pintrich et al.'s (1991) Motivated Strategies for Learning Questionnaire (MSLQ), and student emotional resilience matched with Bernard et al.'s (2012) ) Social-Emotional Wellbeing (SEW). The three existing surveys described below were blended to one comprehensive survey. Survey data were collected electronically through the use of a GoogleDocs form. The blended survey is included as Appendix C.

Measures of the positive student-teacher relationships construct used Pianta's (1999) STRS with modifications in question selections for synthesis into one survey. A highly cited scale, the STRS was designed for a teacher to provide Likert scale ratings regarding his or her students in terms of variables such as approachability, level of emotional support, or positive relationship indicators. Anchors within the Likert scale were level of agreement with a rating of 5 equaling to strongly agree with no items that needed reverse coding. Although frequently used in elementary and middle school contexts, the questions within the STRS was applicable to all levels of relationships between teachers and students and care was given to selecting appropriate questions for both testing the research objectives of this study and application to high school groups.

A recent use of the STRS was Jerome, Hamre, and Pianta's (2009) study of the relationship between closeness and conflict within student-teacher relationships. Jerome et al. (2009) provided longitudinal data of the growth or recession of closeness or conflict between 878 K-6 students and their teachers. A limitation of the use of the STRS in this study, as compared to Jerome et al. (2009), was the use of the STRS with elementary aged students and elementary teachers as compared to high school teachers within this study. But these data demonstrated a level of validity in the use of the STRS survey with both elementary and high school student and teacher populations.

To measure the reliability and validity of the STRS, Webb and Neuharth-Pritchett (2010) provided the survey as developed by Pianta to 35 teachers and 445 elementary school students. Using a Cronbach's Alpha measure of internal consistency, Webb and Neuharth-Pritchett (2010) found varying reliability coefficients based on teacher ( $\alpha = 0.92$ ) and student demographic groups ( $\alpha = 0.84$ ;  $\alpha = 0.65$ ). These results, while demonstrating variability between teacher and student groups on the use of the STRS, show an excellent measure of internal consistency for use with teacher participants.

To measure the student efficacy construct, a modified version of Pintrich, Smith, Garcia, and McKeachie's (1991) MSLQ was used. The MSLQ is divided into subsections focusing on differing aspects of efficacy including value components, expectancy components, affective components, and learning and performance scales. For the purpose of this study, questions from the value components, expectancy components, and affective components were modified and synthesized into the survey design. Although an older survey, the MSLQ is still frequently cited as a high impact survey for measures of both understanding of the theoretical foundations of efficacy and application of efficacy within daily classroom events.

A recent use of the MSLQ was Aydin's (2015) study of high school biology students in Turkey. The researcher administered the learning and performance scales to 286 high school biology students to test a hypothesis that explicit placement of efficacy supports for students encountering complex science studies. The survey data indicated positive variance in student experimental groups receiving the explicit efficacy supports and minimized the negative correlation of the moderating variables of motivation with positive performance. Aydin (2015) tested the reliability and validity of the survey as

measured through a Cronbach's alpha internal consistency ( $\alpha = 0.94$ ). Within the context of Aydin's (2015) study, the MSLQ was used as an instrument to measure changes in students' self-reported perceptions of efficacy and ability to engage in higher level coursework and skills.

For the emotional resiliency construct, a version of Bernard, Mangum, and Urbach's (2012) SEW survey was used for both research groups. The SEW was selected because separate editions of the survey exist for both teacher and student groups (including a version specific to secondary students) which requires no modification of the wording of survey questions between the two groups. Additionally, the SEW included questions focused specifically on noncognitive or sociocultural indicators such as the impact of community stressors on social-emotional wellbeing as described within the literature reviews of this study.

Bernard et al.'s (2012) own application of the SEW provided evidence of the application and validity of the survey. Provided to more than 20,000 Australian elementary and secondary students and 11,000 teachers, the SEW measured the correlation between high self-reported social-emotional wellbeing and ability to adapt to academic and social challenges with student groups. Application and validity of the survey was measured through a Cronbach's alpha reliability order of 0.90 maintained through the elementary teacher, secondary teacher, elementary student, and secondary student versions of the survey.

### **Statistical Analysis Method**

Due to sample size, the teacher participant survey data were analyzed through descriptive statistics and inferential analysis conducted with conclusive caution.

Additionally, embedded qualitative observational and interview data provided additional analysis of treatment application and outcome evaluation to support limitations of inferential analysis. All quantitative data were processed and analyzed using the SPSS computer program.

**Sampling Methods.** Sampling methods for the research design focused on Creswell and Plano Clark's (2011) purposeful sampling design within the teacher focus groups. Creswell and Plano Clark (2011) defined purposeful sampling as a selection of a sample population with a pre-existing knowledge or disposition to the treatment as opposed to a probabilistic sample group which represents a sample size in assumed counterfactual conditions. The selection of the 9th grade English content PLC was intentional within the research design as the content and curricular goals of the course provide for more application of treatment materials and adherence to the quality and objectives of the treatment. The justification for purposeful sampling also included the nature and scope of the treatment as a pilot study for implementation within a small teacher team group.

**Construct Grouping.** To provide better descriptive and inferential evidence of the three constructs of the research study, the 30 questions of the survey were divided into three construct groupings around positive student-teacher relationships, student efficacy, and student emotional resilience. The resulting groups were: construct 1 (10 questions with a total response  $N = 100$ ), construct 2 (9 questions with a total response  $N = 70$ ), and construct 3 (11 questions with a total response  $N = 130$ ). The reasoning behind these construct groupings was to provide data for descriptive and inferential testing as

well as increase construct validity by providing multiple measures of complex constructs such as relationships or efficacy (Shadish et al., 2002).

**Effect Size.** Evaluations of the impacts of a treatment are often measured through statistically significant variance or change (Hill et al., 2008). Research designs must also demonstrate adequate effect size and statistical power to provide evidence of the magnitude of the impact of the treatment (Cohen, 1988).

Jennings et al. (2014) studied the implementation of a prosocial professional development model with a hypothesis of increasing teachers' SEC within the variables of positive relationships, effective classroom management, and fostering social emotional awareness through implementation of the Cultivating Awareness and Resilience in Education (CARE) treatment (Jennings & Greenberg, 2008). The participant size receiving the professional development treatment was 55 elementary school teachers. The design was quasi-experimental with a treatment group receiving the treatment and balanced counterfactual control group. Effect size was explicitly discussed within the findings and meta-analyzed through Cohen's  $d$  (Cohen, 1988). The  $p$  values for each variable indicated statistical significance ( $p \geq .01$  to  $.04$ ) with corresponding effect sizes within medium to high ranges ( $d = .55$  to  $.77$ ).

Given the prior meta-analysis of Jennings et al. (2014), a preliminary effect size and for the outcome analysis, as calculated by the use of G\*Power software, indicated a minimum needed sample size of 33 ( $df = 32$ ) to conduct an analysis through a matched pairs  $t$ -test at  $1 - \beta = .95$ . These assumptive data were obtained with  $ES = .65$  with  $\alpha = .05$ . As identified earlier in this chapter, the participant sample size did not meet the needed sample size for acceptable statistical power in inferential analysis. Therefore, all

conclusions in this study were taken with statistical caution and related only to the population at hand. This lack of an appropriate sample size supports an area of future research to expand the sample size if the treatment is replicated.

**Descriptive Analysis.** Descriptive statistical results included the mean ( $M$ ), standard deviation ( $SD$ ), skewness ( $Sk$ ), and kurtosis ( $K$ ) for the pre-test and post-test teacher participant surveys. To provide evidence of growth between the pre-test and post-test surveys, descriptive statistics of the  $M$  and  $SD$  were captured. To analyze any outliers, extreme flatness or peakness, and response abnormalities,  $Sk$  and  $K$  were analyzed between pre-test and post-test survey results and compared to standardized symmetric unimodal distributions.

These descriptive data provided initial evidence of growth in teacher's perceptions of positive student-teacher relationships, efficacy, and resilience. The pre-test and post-test  $M$ ,  $SD$ ,  $Sk$ , and  $K$  for each construct were reported. The  $M$  and  $SD$  were presented in pre-test and post-test comparison to analyze differences between the tests in the matched pairs design. These descriptive data were used to provide evidence towards an answer for research question one with positive growth within the three variable groupings as evidence of increases in the teacher participant group's perception of the variable.  $Sk$  and  $K$  were reported to qualify and explain any extreme peakness or flatness within the pre-test and post-test results.

**Inferential Analysis.** Inferential analysis of these survey data required proposed null and alternative hypotheses. A  $H_0$  = increased educator SEC and CRT professional development will have no impact on teacher perceptions of the variables of positive student-teacher relationships, student efficacy, and student emotional resiliency and a  $H_a$



= educator SEC and CRT professional development will demonstrate a positive impact on teacher perceptions of the variables of positive student-teacher relationships, student efficacy, and student emotional resiliency were developed for the inferential analysis.

Due to sample size and lack of effect size and statistical power issues, a non-standardized inferential test was required to test these data. Because of the limited sample size, a nonparametric multivariate analysis of covariance inferential test (MANCOVA) was used based on a formula for violated assumptions such as sample size as developed by Finch (2005) and Katz and McSweeney (1980). The MANCOVA test used a ranking of matched pairs responses within the argument that ranking would provide a more robust departure from normality than a  $F$  statistic given the sample size violations of the research design (Finch, 2005). Being a multivariate design, a standard chi-square statistic ( $X^2$ ) was compared to a computed  $X^2$  based upon Pillai's trace ( $V$ ) with an added covariate (Finch, 2005; Katz and McSweeney, 1980). The covariate was established as the number of years of teaching experience of the participant group as to provide for better rankings and operationalization given the violated assumptions of the MANCOVA test (Finch, 2005).

Confirmation or rejection of the  $H_0$  and  $H_a$  was based on a comparison between the computed  $X^2$  and a comparison to a standard chi square chart by  $df$  and an  $\alpha = .05$ . The test statistic was expressed through Katz and McSweeney's (1980) nonparametric MANCOVA formula as:

$$X^2 = (n - 1)V$$

where  $n$  = sample size and  $V$  = Pillai's trace. As noted in this chapter and in analysis of findings in the next chapter, all inferential conclusions and rejections of the  $H_0$  were done

with statistical caution given the limited sample size receiving the professional development treatment. Because the sample size was below the size needed to demonstrated effective statistical power, any inferential conclusions in these data were made only regarding the sample size of this study and cannot be inferred to other groups or larger populations.

**Survey Data Reliability Measures.** To test the reliability of survey data, a Cronbach Alpha was used to measure internal consistency with pre-test and post-test survey responses. A reliability coefficient of  $\alpha \leq .70$  was considered acceptable as aligned with most social science research designs (Salkind, 2008). The coefficient result of the Cronbach Alpha was reported with the quantitative data results in chapter five.

### **Qualitative Convergent Design**

Qualitative measures were required within the research design due to the need for measures of transferability between treatment and implementation as well as a lack of statistical inferences due to the low sample size of the teacher participant group. The qualitative design was embedded in that it added information regarding the transferability, fidelity of implementation, and validity of outcome data and existed temporally with the quantitative data (Creswell & Plano Clark, 2011). Below is an outline of the qualitative data collection design and measures for outcome evaluation.

**Observational Data.** The first qualitative measure was in regards to the transferability of program design to implementation within the teacher participant group's classroom as measured through observation data. Observation data on the teacher participant group's classrooms were gathered by an outside neutral observer through two classroom observations, one pre-intervention and one post-intervention, using

Queensberry and Doubet's (2006) Positive Relationship Matrix (PRM) tool modified to include additional SEC and CRT constructs of building positive relationships, building student efficacy, and building student emotional resilience. Each sub-scale contained four to five observable indicators for each section with ranking anchors of (1) seldom, (2) occasionally, and (3) consistent along with an option for additional comments by the observer. This tool is included as Appendix D. The neutral observer was trained by the researcher directly on both the use of the tool and received a modified introduction to the professional development sessions, key strategies communicated to teacher participants, and desired outcomes. Additionally, the neutral observer had completed doctoral level coursework in research methodology and qualitative measurements.

Observation data were gathered through this tool by observation evidence of application of SEC and CRT strategies within the classroom. The two time designations were before and after the professional development intervention treatment to test for growth as attributed to the treatment application. These observation data were organized to provide evidence towards research question one with some further support for responding to the evaluation question based on the level and frequency of implementation by teacher participants.

Observational data were analyzed through an inductive process to identify commonalities and themes within the teacher participant group's implementation of the treatment within the classroom. The inductive hypothesis for these data was the teacher participant group will demonstrate increased knowledge and application of SEC and CRT strategies as well as the three variables of positive student-teacher relationships, student efficacy, and student emotional resilience.

These written data were organized around themes, organized through methods discussed by Creswell and Plano Clark (2011) and Erlandson, Harris, Skipper, and Allen (1993), and include: category label, researcher's description, quotation or evidence, frequency between pre-intervention and post-intervention, inductive conclusion, and construct reference. The category label was the primary coding or grouping used for observational, visual, or oral data. Observer's description was the context or additional information to elucidate the evidence. Direct teacher or student quotation or antidotal evidence was a direct quotation or description of evidence to provide an empirical basis for the analysis. Frequency was the amount or commonality of the occurrence of the theme within raw data. The inductive or emergent conclusion was an indicator of the conclusive nature of the item and how the item applies to the research question or evaluation question. The construct reference indicated if the item impacted which construct of the research study: positive student-teacher relationships, student efficacy, and student emotional resiliency.

A priori codes for observational data included: respect, reflection, self or peer correction, emotional baselines, and curricular connections based in the research designs of the three studies used as foundational to this research study: PATHS (Greenberg & Kusche, 1993; Kam et al., 2004), CARE (Jennings et al., 2014), and Warm Demander Pedagogy (Bondy, Ross, Hambacher, & Acosta, 2012; Kleinfeld, 1972; Ross, Bondy, Galligane, & Hambacher, 2008; Ware, 2006). Evidence, especially evidence of growth between the pre-intervention and post-intervention observations, was used to indicate an inductive conclusion that the program treatment was impactful and provided empirical evidence towards research questions one. Additionally, growth between the pre-

intervention and post-intervention was used to indicate fidelity of implementation at adherence to program within the evaluation question (Dusenbury et al., 2003).

**Session Observation Data.** The second qualitative measure was an observation of a PD session by the neutral third-party observer who conducted the classroom observations. The purpose of the session observation was to capture qualitative evidence directly related to the research question one and to provide additional evidence of fidelity of implementation of the program objectives to answer the evaluation question. To capture these data, a session observation grid was developed through a blending of several prominent professional development foci as discussed in chapter three of this study (Bryk et al., 2010; Johnson & Fargo, 2010; Johnson, Kahle, & Fargo, 2007; Saderholm et al., 2016). These foci included: (1) session objectives communicated, (2) material alignment with objectives, (3) participant engagement, (4) applied activity within the session, (5) session participants engaging with the applied activity, (6) participant understanding of session objectives, and (7) facilitator review of next session and connections. The observation grid used is included as appendix E.

The same themes as the teacher observation data were used to organize these data. A deductive qualitative coding was used to indicate critical needs within the sessions such as session objectives, material alignment, participant participation, and application of an activity or enrichment. Evidence of these inductive codes was applied to answering research question one as well as further evidence of fidelity of implementation of the intervention and the evaluation question.

**Program Artifacts Data.** The third qualitative measure was artifacts collected during the implementation of the professional development intervention. These items

included participant notes sheets, exit cards, and journal entries. These items were collected throughout the intervention by the program facilitator and delivered to the researcher. Serving as both metacognitive reflections by the participants on the professional development sessions and focus group data collected during the sessions, these items were considered real time analysis of Guskey's (2000) critical levels of participant's reactions, participants' learning, and participants' use of new knowledge or skills as well as Sztajn's (2011) indicators of knowledge and beliefs of teachers, context, program goals, critical issues, and strategies.

Analysis of program deliverable data were conducted through an emergent coding system. In addition to support of the research question two, this emergent coding process served as a real-time measure of fidelity of implementation and allowed the researcher, in a dual role as the professional development intervention creator, an opportunity to revise, revisit, or remodel concepts which were not being implemented effectively within the treatment (Dusenbury et al., 2003).

**Student Interview Data.** The final qualitative data were a collection of interviews of students at the conclusion of the professional development treatment. The student interview group was identified by teacher participants in the context of journal entry responses throughout the treatment. The interviews were conducted by a neutral third-party. Questions were created and organized to match the three constructs of the research design: positive student-teacher relationships, student efficacy, and student emotional resilience. Questions included the students' views on relationships with her/his teacher, level of care her/his teacher demonstrates, her/his teacher's willingness to allow for reflection and revision, level of social and emotional support by her/his teacher, if the

teacher has explicitly discussed or provided content related to social and emotional topics, and if the teacher has explicitly discussed or provided content related to topics of race and culture. The student interview questions also included a script for the interviewer to read to the student prior to the questions. The student interview questions are included as appendix F.

Similar to the program artifacts, the student interview data were analyzed through an emergent coding process to identify if students provided evidence of program constructs related to research questions one and two (positive student-teacher relationships, student efficacy, and student emotional resilience) and her/his teacher engaging in these constructs in class. The emergent coding process for the student interview data directly applied to research question number two and was a beginning point for areas of future research around the causal relationship between the professional development intervention and greater impacts on student perception and performance.

### **Evaluation Question and Fidelity of Implementation**

This section contains a review of evaluation measures and analysis for reliability and fidelity of implementation within the research design. Dusenbury et al. (2003) identify the importance of reflective analysis when working with social science treatments as efforts to reduce the effects of moderating variables on research outcomes and to strengthen any research question conclusions.

#### **Fidelity Measures**

A seminal study in fidelity indicators for social science research, Dusenbury et al. (2003) identifies five key fidelity indicators: adherence to program, application of proper dosage, quality of program delivery, proper implementation of treatment, and program

differentiation. Dusenbury et al. (2003) identifies these five indicators as critical to the successful implementation of program interventions focusing on trainings or professional development due to the transferable nature of increasing employee knowledge with application within a real-world situation.

These five indicators were the measures used to determine fidelity of implementation within the intervention and provided evidence for responding to the evaluation question within the research design. Data gathered of evidence of fidelity implementation were from qualitative observations of intervention professional development sessions, teacher participant completed professional development materials, and classroom observations. Adherence to program was analyzed through session observations and completion of intervention materials, dosage was measured through intervention attendance, quality was analyzed through teacher participant responses to program materials, and proper implementation was analyzed through session observations and completion of program materials. Because only one professional development intervention was implemented at this time, program differentiation could not be measured.

### **Chapter Discussion and Conclusion**

Building upon the literature review in chapter three, this chapter expanded the technical plan for implementing the professional development theory of treatment as well as provided a method for analysis and evaluation of possible outcomes of the treatment. This chapter provided a link between the theoretical frameworks as established in the literature reviews, data of existence of need, and a proposed intervention to the problem as measured through the collection of empirical data. The treatment intervention design



and analysis and evaluation outcome measures discussed in this chapter were applied to a teacher participant group as a research study will be discussed in chapter five.

## **CHAPTER V**

### **RESULTS**

As discussed in chapter four, a professional development (PD) intervention which focused on teacher social-emotional competencies (SEC) and culturally responsive teaching (CRT) was implemented with a group of twelve teacher participants at a Mid-Atlantic high school through a professional learning community (PLC) model. Through a collection of ten, 45 minute professional development sessions totaling seven and a half hours over the course of five months, participants were introduced to or revisited the framework and strategies of SEC, CRT, and warm demander pedagogy (WDP). The goals of these sessions were to increase participants' knowledge of and application in instruction within the three constructs of the research study: student-teacher relationships, student emotional resiliency, and student efficacy. Participants' knowledge of and application of these three constructs, as demonstrated through quantitative and qualitative data, were the measured outcomes of this study.

This chapter presents the findings of the impact of this intervention through a triangulated convergent mixed methods designed (Creswell & Plano Clark, 2011). Built on the Leviton and Lipsey's (2007) theory of treatment, the research design indicated a professional development intervention, and the quantitative and qualitative evidence gathered from the intervention, would reveal a change in the teacher participants' knowledge of and application of the three constructs. Two research questions guided the study of the intervention, and one evaluation question guided the examination of the fidelity of implementation. A summary of the quantitative and qualitative data are presented first in this chapter with attention to descriptive statistics, inferential statistics,

and qualitative data. These data were combined to triangulate an analysis in regards to the research questions. Qualitative data were then analyzed to show the fidelity of implementation of the evaluation question. Finally, limitations, impact on practice, and areas for future research for these data results are discussed.

### **Review of the Theory of Treatment, Hypotheses, and Research Questions**

As discussed in chapter four, the proposed professional development intervention was built on Leviton & Lipsey's (2007) theory of treatment in which the problem was clearly defined from a logical perspective, crucial inputs were specified, an elucidation of the transformation process, and specification of the expected output. The problem was expanded beyond the complex and multivariate achievement or opportunity gaps to a logical and specific absences of SEC and CRT knowledge for teachers and the need for professional development. While the noncognitive and sociocultural aspects of the academic achievement and opportunity gaps provided a theoretical foundation for this problem, the problem itself was not a solving of these complex, and logically challenging, issues. The crucial inputs were designed to increase teacher participants' perceptions of positive student-teacher relationships, increased student efficacy, and increased student emotional resilience and included introductory and reflective designs which included framing of SEC and CRT concepts within teacher participants' practice, application of SEC and CRT strategies, response to classroom scenarios and videos, peer discourse, and reflective journaling on both practice and student social-emotional growth. The transformation process was exploratory and focused on a mixture of perception data from teacher participants, examples of engagement in materials from the participants, measures of fidelity of implementation of the treatment, and an analysis of reflections on

the importance of the PD treatment and implementation within the classroom. The expected outputs were introductory, limited, and focused on evidence of changing perceptions of the three constructs of the research design. These outputs included an overarching expected output to the research design was positive growth in teacher participants' perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience and more specific outcome expectations including: recognition of the importance of the PD treatment by participants, willingness to engage in program materials, finding value in program materials, practice and implementation of materials, and reflection on the impact of implementation of materials on students.

Within the research design, quantitative and qualitative data were analyzed in a convergent design to show perceptual change in the teacher and student participant groups. The counterfactual state was represented through pre-test stasis data prior to intervention and the impact state was represented through post-test stasis data after the intervention.

### **Hypotheses Review**

The hypothesis for the research design was that increased knowledge and application of SEC and CRT practices by teachers will improve students' perceptions of positive student-teacher relationships, increase student efficacy, and increase student emotional resilience. Due to sample size and implementation limitations, testing of the hypothesis was limited to positive growth in teacher participant's perceptions and knowledge of positive student-teacher relationships, increase student efficacy, and increased student emotional resilience. While student data were used in answer the second research question, the second research question was used to further support

evidence of changes in teacher perceptions of the three constructs. Data demonstrating a causal relationship between the professional development intervention and impacts on student academic achievement were not explored in the research design due to systemic and program limitations as well as the limited time and dosage of the professional development treatment. As will be discussed in this chapter under limitations and areas for future research, the long term goals, which were not directly addressed in this study, are that increases in these SEC and CRT strategies by teachers will potentially ameliorate the negative effects of the noncognitive and sociocultural aspects of the achievement gap (Civic Enterprises et al., 2013; Farrington et al., 2012; Jensen, 2009).

### **Research Questions**

The research questions included:

1. What was the impact of a social-emotional competencies and culturally responsive teaching professional development intervention on teachers' perceptions of positive student relationships, student efficacy, and student emotional resilience?
2. What was the impact on students selected by teacher participant's understanding of and ability to provide examples of positive student relationships, student efficacy, and student emotional resilience?

### **Evaluation Question**

The evaluation question included:

1. To what degree of fidelity was the professional development intervention implemented and did teacher participants interact with and participate in the

professional development intervention focusing on increasing social-emotional competencies and culturally responsive teaching?

### **Quantitative Results**

Quantitative data were gathered through a pre-test and a post-test survey. These data were collected electronically and completed by all teacher intervention participants. A first level analysis of these data employed descriptive statistics including mean, standard deviation, skewedness, and kurtosis of both the pre-test and post-test. These data were divided by composite score for the three variables of the study: student-teacher relationships, student efficacy, and student resilience with attention to the difference in means and standard deviation between pre-test and post-test. A second level quantitative analysis of these data was carried out through an inferential test of the multiple outcome measures (student-teacher relationships, student efficacy, and student resilience) through the application of a nonparametric multivariate analysis of covariance (MANCOVA) between the pre-test and post-test responses. Finally, a Cronbach's Alpha was used to measure internal consistent and reliability of the teacher participant survey data.

### **Descriptive Statistical Results**

Descriptive statistical results included the mean ( $M$ ), standard deviation ( $SD$ ), skewness ( $Sk$ ), and kurtosis ( $K$ ) for the pre-test and post-test teacher participant surveys. These data were reported below and compared the pre-test and post-test  $M$ ,  $SD$ ,  $Sk$ , and  $K$  for composite scores for each of the study's constructs. These data are presented below in Tables 11, 12, and 13.

Table 11

*Pre-test and Post-Test Mean, Standard Deviation, Skewness, and Kurtosis of Composite Scores for Construct 1: Student-Teacher Relationships*

	Min	Max	<i>M</i>	<i>SD</i>	<i>Sk</i>		<i>K</i>	
					Statistic	Std. Error	Statistic	Std. Error
Relationship Composite Pre	32	47	39.75	5.802	-.098	.637	-1.937	1.232
Relationship Composite Post	42	50	46.75	2.417	-.716	.637	.328	1.232

Note: *N* = 12 respondents for both pre-test and post-test

**Construct One Responses Descriptive Discussion.** The first construct, positive student-teacher relationships, was a grouping of ten questions aligned with this construct. With each question on a five point Likert scale (5= strongly agree; 1= strongly disagree), this group had a maximum value of 50. A review of the *Sk* and *K* for this variable indicated a normal distribution in both the pre-test (*Sk*= -.098; *K*= -1.937) and post-test (*Sk*= -.716; *K*= -.328). The increased platykurtic distribution of the post-test *K* statistic indicated an increased normal distribution of responses for the post-test as compared to the pre-test. The *M* for the first variable pre-test was 39.75. The *M* for the first variable post-test was 46.75. This resulted in a *M* difference of 7 or a 14% increase from the pre-test to the post-test for this variable.

Table 12

*Pre-test and Post-Test Mean, Standard Deviation, Skewness, and Kurtosis of Composite Scores for Construct 2: Student Efficacy*

	Min	Max	<i>M</i>	<i>SD</i>	<i>Sk</i>		<i>K</i>	
					Statistic	Std. Error	Statistic	Std. Error
Efficacy Composite Pre	15	38	25.42	7.379	.143	.637	-.591	1.232
Efficacy Composite Post	26	42	35.33	3.869	-.914	.637	2.874	1.232

Note: *N* = 12 respondents for both pre-test and post-test

**Construct Two Responses Descriptive Discussion.** The second construct, student efficacy, was a grouping of nine questions aligned with this construct. With each question on a five point Likert scale (5= strongly agree; 1= strongly disagree), this group had a maximum value of 45. A review of the *Sk* and *K* for this variable indicated a normal distribution for the pre-test (*Sk*= .143; *K*= -.591). The post-test *Sk* indicated a normal distribution (*Sk*= -.914), but the *K* indicated a slightly elevated leptokurtic distribution (*K*= 2.874). In comparing the *K* statistic with the distance between minimum (26) and maximum (42) responses, the slightly elevated leptokurtic distribution was explained as compensating for a greater number of maximum responses in these post-test data. The *M* for the pre-test for the third variable was 25.42. The *M* for the post-test for the second value was 35.33. This resulted in a *M* difference of 9.91 or 22% increase from the pre-test to the post-test for this construct. The greater *M* difference for this construct was predicted by the researcher due to teacher participants' having less intuitive or prior knowledge of the student efficacy variable over relationships variable.



Table 13

*Pre-test and Post-Test Mean, Standard Deviation, Skewness, and Kurtosis of Composite Scores for Construct 3: Student Resilience*

	Min	Max	<i>M</i>	<i>SD</i>	<i>Sk</i>		<i>K</i>	
					Statistic	Std. Error	Statistic	Std. Error
Resilience Composite Pre	29	48	37.67	6.344	.111	.637	-1.199	1.232
Resilience Composite Post	44	53	48.58	3.059	-.326	.637	-1.076	1.232

Note: *N* = 12 respondents for both pre-test and post-test

**Construct Three Responses Descriptive Discussion.** The third construct, student resilience, was a grouping of 11 questions aligned with this construct. With each question on a five point Likert scale (5= strongly agree; 1= strongly disagree), this group had a maximum value of 55. A review of the *Sk* and *K* for this variable indicated a normal distribution in both the pre-test (*Sk*= -.111; *K*= -1.199) and post-test (*Sk*= -.326; *K*= -1.076). *Sk* and *K* differences between pre-test and post-test did not indicate noticeable platykurtic or leptokurtic changes. The *M* for the pre-test for the second variable was 37.67. The *M* for the post-test for the second value was 48.58. This resulted in a *M* difference of 10.91 or 19.83% increase from the pre-test to the post-test for this variable. The greater *M* difference for this variable was predicted by the researcher due to teacher participants' having less intuitive or prior knowledge of resilience variable over relationships variable.

### **Inferential Statistical Results**

To test for statistical significance within the multivariate variables (student-teacher relationships, student efficacy, and student resilience) between the pre-test and post-test, a nonparametric multivariate analysis of covariance (MANCOVA) was used

with an established covariant of years teaching for the participants. As Finch (2005) notes, a nonparametric multivariate test based on ranking can provide a robust chi-square statistic even when assumptions are violated. In the case of this study, the sample size (12) was a violated assumption for any inferential testing. As discussed in chapter four of this study, to demonstrate an acceptable effect size using a Cohen's  $d$  ( $ES = \geq 0.65$ ), a sample size of 33 ( $df = 32$ ) participants would be required at an  $\alpha = .05$ . While Finch's (2005) use of nonparametric testing did allow for the inferential testing, the sample size and time frame limitations of the intervention still challenged statistical significance.

The MANCOVA was run using SPSS software using a ranking of composite scores for the pre-test and post-test for each variable to find the Pillai's trace. A chi square statistic was then manually calculated using Katz and McSweeney's (1980) expression:

$$X^2 = (n - 1)V$$

where  $n$  = sample size and  $V$  = Pillai's trace. The computed  $X^2$  was then compared to a standard chi square chart by  $df$  and an  $\alpha = .05$ .

For the hypothesis test, the  $H_0$  = increased educator SEC and CRT professional development will have no impact on teacher perceptions of the variables of positive student-teacher relationships, student efficacy, and student emotional resiliency. The  $H_a$  = educator SEC and CRT professional development will demonstrate a positive impact on teacher perceptions of the variables of positive student-teacher relationships, student efficacy, and student emotional resiliency. Confirmation or rejection was based on a comparison of the computed  $X^2$  as compared to a standard chi square chart with an  $\alpha$

equal to or less than .05. Results of the Pillai's trace nonparametric test are found below in Table 14.

**Table 14**

*Initial Pillai's Trace Results*

Effect	<i>n</i>	<i>df</i>	<i>Value</i>	<i>F</i>	Hypothesis <i>df</i>	Error <i>df</i>	<i>Sig.</i>
Pillai's Trace	12	11	.383	6.198 <sup>b</sup>	1.000	10.000	.032

**Inferential Statistics Discussion.** The Pillai's trace result of  $V = .383$  was placed into Katz and McSweeney's (1981) expression as:

$$X^2 = (12 - 1).383$$

The resulting computed  $X^2 = 4.213$ . In comparison, an  $X^2$  needed to demonstrate statistical significance at  $\alpha = .05$  is 19.675. As such, the MANCOVA did not result in statistical significance and the null hypothesis was not rejected.

One rationalization for the lack of statistical significance included the limited sample size of the intervention. With a  $df = 11$ , even Finch's (2005) nonparametric multivariate test based on ranking was limited as manipulated variables within his methods included multiple levels of group sizes of 5, 10, and 50 so the largest  $df = 49$ . In Finch's (2005) method, the Cohen's  $d$  for the largest variable group was 0.8 indicated a larger statistical power than what was available within this study. As such, reaching a needed Pillai's trace statistic to show significance would never be possible even with the evidenced  $M$  growth discussed in the descriptives section of this chapter.

In comparison, two of the studies the intervention was based in, the Promoting Alternative Thinking Strategies (PATHS) (Greenberg & Kusche, 1993) and Cultivating Awareness and Resilience in Education (CARE) (Jennings et al., 2014) both had larger teacher participant sample sizes than this study. PATHS' sample size was 16 teachers and

CARE's sample size was 50 teachers. The inferential testing for both the PATHS and CARE interventions were both multivariate ( $t$  ratio and ANOVA) and resulted in statistical significance. As will be discussed in the limitations and areas for future research sections of this chapter, a larger sample size for the intervention may have resulted in a statistical significance given the growth in pre-test and post-test means.

Another rationalization for the lack of statistical significance was the limited time frame and dosage amount for implementation of the intervention. When describing the effectiveness of nonparametric multivariate tests, Brombin, Salmaso, Fontanella, and Ippoliti (2015) identify time and amount of dosage between pre-test and post-test as a mitigating variable impacting results with less time impacting the ability to reach significance exponentially. Brombin et al. (2015) argue that decreased space between tests reduces participants' reflectiveness in responses resulting in mirrored responses and less robustness to inferential testing. By comparison, the PATHS intervention had a dosage of 2 to 3 45 minutes sessions per week as opposed to twice monthly dosages within this intervention. Increasing both sample size, time line, and dosage amount will be further discussed in the limitations and areas for future research sections of this chapter.

### **Internal Consistency and Reliability Results**

The researcher used a Cronbach's Alpha to measure internal consistency and reliability of the teacher participant survey questionnaire data. A reliability coefficient of .70 was established as a benchmark for an acceptable reliability coefficient within a social science research situation (Salkind, 2008). The Cronbach's Alpha was performed

for all items and then for each of the three construct response groupings. Results of the Cronbach's Alpha are included below as Table 15.

Table 15

*Cronbach's Alpha for Teacher Participant Survey Data*

Construct	N of items	Cronbach's Alpha
All items	30	.77
Construct 1: Student-teacher relationships	10	.79
Construct 2: Student efficacy	9	.71
Construct 3: Student emotional resilience	11	.75

**Internal Consistency and Reliability Discussion.** The resulting Cronbach's Alpha for all items and the three constructs was above a reliability coefficient of .70 indicating an acceptable internal consistency between responses. The threshold results of construct 2 ( $\alpha = .71$ ) was noted with an explanation of fewer survey items within this construct resulting in a lower internal consistency due to fewer examples of outliers impacting reliability at a greater rate (Salkind, 2008; Yurdugul, 2008).

### Qualitative Results

Qualitative data were collected through four sources: teacher pre-intervention and post-intervention classroom observations, professional development session observation, program implementation materials, and post-intervention student interviews. Qualitative data were collected to support quantitative results as well as provide evidence of fidelity of implementation of the program as designed.

### Qualitative Results and Discussion

All qualitative data were organized with a coding system based on themes from existing literature. The coding label was the primary grouping used for observational,

visual, or oral data. For the teacher observation results, an additional header of pre-intervention or post-intervention were added to indicate if the item demonstrated stasis or growth between the observations.

As was discussed in chapter four, observational data (classroom observations and professional development sessions), along with student interview data, were collected by a neutral third party observer. Teacher participant session materials were completed by the participants as part of the session and then collected by the program facilitators and provided to the researcher. All qualitative data above were then coded by the researcher based on the research questions, professional development intervention objectives, and support from the literature.

**Teacher Observation Coding.** Teacher observations were based on a pre-intervention and a post-intervention classroom observations. The observer used a version of Queensberry and Doubet's (2006) Positive Relationship Matrix (PRM) tool modified to explicitly include the constructs of building positive student-teacher relationships, building student efficacy, and building student emotional resilience. Each sub-scale contained four to five observable indicators for each section with ranking anchors of (1) seldom, (2) occasionally, and (3) consistent along with an option for additional open ended comments by the observer.

For teacher observation coding connected to positive student-teacher relationship, four codes were identified due to references within existing literature discussed in the literature reviews of this study. These codes were greeting students, communication, teacher-student interactions, and respect. Due to the frequency and fluidity of relationship actions, this construct produced the greatest number of codes and connections to

construct. The code greeting students described the physical action of greeting students at the classroom door or in the classroom in a manner beyond content or curriculum engagement (Boykin & Noguera, 2011; Chamber & McCreedy, 2011; Hammond, 2014; Jones & Bouffard, 2012; Ware, 2006). Communication was evidence of teacher participants engaging with students with positive language, affirmative tones, body language, or other methods of SEC or CRT aware communication (Banks, 2015; Bondy et al., 2012; Boykin & Noguera, 2011; Greenberg et al., 2003; Hammond, 2014; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Ware, 2006; Zins, 2000). Teacher-student interactions were evidence of positive verbal or physical interventions between students and teachers (Banks, 2015; Bondy et al., 2012; Boykin & Noguera, 2011; Greenberg et al., 2003; Hammond, 2014; Jennings & Greenberg, 2008; Jensen, 2009; Ware, 2006; Zins, 2000). Respect was evidence of mutual respect between teachers and students as captured by both teacher and student actions (Banks, 2015; Bondy et al., 2012; Boykin & Noguera, 2011; Greenberg et al., 2003; Hammond, 2014; Jensen, 2009; Tobin et al., 2013; Ware, 2006; Zins, 2000).

For teacher observation coding connected to student efficacy, two codes were identified. These codes were reflection and self or peer correction. Reflection was evidence of teachers engaging students in reflective actions on both academic and social-emotional indicators (Bandura, 1977; Bondy et al., 2012; Hammond, 2014; Ware, 2006; Williams & Williams, 2010). Self or peer correction was content or curricular evidence of teachers actively encouraging or creating opportunities for students to engage in self-correction of student work or create groupings of students to provide peer support (Banks, 2015; Hammond, 2014; Jensen, 2009; Ware, 2006).

For teacher observation coding connected to student emotional resilience, four codes were identified. These codes were emotional baselines and curricular connections along with the teacher-student interactions and respect codes identified in the positive student-teacher relationships construct. Emotional baselines were evidence of interactions between teachers and students where teachers either identified a students' emotional wellbeing or indicated an understanding of the students' emotional wellbeing (Greenberg et al., 2003; Hammond, 2014; Jennings & Greenberg, 2008; Zins, 2000). Curricular connections were evidence of SEC or CRT strategies imbedded or explicitly discussed through classroom activities, lessons, or discourse (Chambers & McCreedy, 2011; Cherniss et al., 2006; Elksnin & Elksnin 2003; Greenberg et al., 2003; Jennings & Greenberg, 2008; Mowat, 2011; Tobin et al., 2012; Zins, 2000). A visual summary of these codes related to teacher observation data are presented as table 16 below.

Table 16

*Teacher Observation Coding*

Coding Label	Researcher Description	Data Examples (Pre)	Data Examples (Post)	Construct Reference
Greeting students	Teachers personally greeting students at the door prior to class	None	Teacher explicitly greeting students at the door by name and engaging in non-academic discussions.	Relationships
Communication	Teachers communicating directly with students with positive and/or affirmative tones and/or language.	Action-based: frequent eye contact; smiling	Action-based: frequent eye contact; smiling; greeting students	Relationships
		Generalized collective language: "this group; "the class"; "our objective"	Personalized language: "It's important to me you do this step"; "important to me"; "You know why it's [sic] going to be fun? Because you understand it!"	
		Directed language: "be quiet"; "stop talking"		



Table 16

*Teacher Observation Coding (cont.)*

Coding Label	Researcher Description	Data Examples (Pre)	Data Examples (Post)	Construct Reference
Teacher-Student Interactions	Positive interactions between teacher and students.	Action-based: frequent eye contact; smiling; speaking to students one-on-one	Action-based: frequent eye contact; smiling; greeting students; speaking to students one-on-one  Personalized language: "I need to hear you because what you are saying is important. Please speak up"; "How is this group doing? It's important to me you do this step."	Relationships Resiliency
Respect	Mutual respect between teachers and students.	None	Action-based: frequent eye contact; smiling; greeting students  Respectful language between students-teachers: "thank you"	Relationships Resiliency
Reflection in a Low-Risk Environment	Teachers encouraging student reflection in a low-risk environment.	None	Action-based: one-on-one conversations; had student reflect on their work and how does it make them feel when they got it right.	Efficacy
Self or Peer Correction	Teachers encouraging students or creating group activities for students to reflect on corrections.	Action-based: one-on-one conversations; students comparing first and second draft work.	Action-based: one-on-one conversations  Specific lesson designed around student or peer-correction  Verbal engagement: "Explain that answer for me."; "Let's expand that."	Efficacy
Emotional Baselines	Interactions between teachers and students where teachers inquire or address students' emotional baselines or conditions.	None	Action-based: frequent eye contact; smiling; greeting students; had student reflect on their work and how does it make them feel when they got it right.  Personalized language: "You ok back here? You normally do not sit back here. Everything ok?"; "How are you all doing?"	Resiliency

Table 16

*Teacher Observation Coding (cont.)*

Coding Label	Researcher Description	Data Examples (Pre)	Data Examples (Post)	Construct Reference
Curricular Connections	Connections between social-emotional competencies, culturally responsive teaching, and curricular content.	None	<p>Action-based: watching shorting film about making fun of others; reading a text on the emotions surrounding death.</p> <p>Emotion-based language: “It can be emotional when we respond to a poem.”; “What do you think he was feeling when he wrote that?”</p>	Resilience

**Program Materials Coding.** Unlike the teacher observation data, the program materials were pre-designed by the researcher and were directly connected to specific constructs. Because program materials were collected after a specific professional development session, the materials were designed to be aligned with a specific construct. As such, the coding labels for the program materials align with the three constructs within the research design. The relationship code captured evidence from program materials specifically regarding teacher participants’ reflections on positive relationships, forming relationships, and challenges to successful relationships. The efficacy code captured evidence from program materials related specifically to teacher participants’ understanding, engagement, and reflections on strategies for building student efficacy. The resilience code captured evidence from program materials related specifically to teacher participants’ understanding, engagement, and reflections on strategies for building student emotional resilience. A visual summary of these codes related to program materials is presented as table 17 below.

Table 17

*Program Materials Coding*

Source	Description	Examples from Source	Emergent Coding
Exit Cards and In-Session Activities	Brief responses to in-session materials, definitions, and activities designed to check for teacher participant understanding.	Pre-Intervention defining of key terms to gauge prior knowledge	Growth in reflection
		Responses to video examples	Growth in knowledge
Scenario Responses	Responses to SEC or CRT student scenarios to approximate usage of strategies.	“First of all, if Emmanuel “shut down” when reading something that highly charged, I wouldn’t [sic] prompt him in front of the class “to finish reading.” That seems like a setup. I’d [sic] talk to him privately and gently and say, “You were doing a great job reading today.”	Growth in knowledge
			Detached to shared relationships
			Mutual respect
		“Students often come in already agitated by things that happened in the morning.”	Control and power structures
			Emotional Baselines
Participant Journaling	Teacher participant responses to pre-written prompts either during sessions or as follow up between sessions. Journals included identification of focus students for interviews.	Mutual respect is tough but very important.”	Efficacy lessons
		“Relationships can be difficult to read at first so you have to be cautious but also build the trust.”	Detached to shared relationships
			Mutual respect
		“It can be about letting go of control which can be difficult.”	Control and power structures
			Emotional Baselines
		“Class control comes through rapport and community.”	Efficacy lessons
		“I have witnessed my student struggling both academically and socially but know he wants to be on the football team so I have used that as an entry point for talking with him.”	
		“Working with [redacted student] and hearing about these theories has me thinking that this is something we can teach all teachers...”	

**Student Interview Coding.** Student interview data were collected through interviews, conducted by the neutral third party observer, for 11 students. These students were identified by the teacher participants with one teacher participant requesting not to identify a student for interview. These students were chosen through the professional development design and were identified by the teacher participants through journal

reflections and continued work with these students. The purpose of the student interviews was to provide limited and initial inquiry into any transferability from the teacher participant group's professional development and student recognition of the three constructs of the research design (positive student-teacher relationships, student efficacy, and student emotional resilience) as well as provided evidence of the teacher participant group's interactions and implementation of program objectives at a level visible to students.

For the purpose of coding and analysis, student interview questions were divided into three groups aligned with the three constructs. A subset of three questions were asked to address the relationship construct with three other questions containing elements of the relationship construct, two questions to address the efficacy construct with five other questions containing elements of the efficacy construct, and three questions to address the resilience construct with three other questions containing elements of the resilience construct. Because questions were designed around the three constructs, the constructs served as the coding label for analyzing these interview data. However, because of the less predictable and designed responses of student interviews, an emergent coding system was identified to identified key phrases or statements by students as connected to existing literature.

For the relationship construct, emergent coding of specific examples of relationships between the student and teacher were a critical area of analysis. These examples were identified through specific word choice used by the student to indicate strength in the relationship and evidence of specific topics related to relationships

(emotional support or caring) (Boykin & Noguera, 2011; Chamber & McCreedy, 2011; Hammond, 2014; Jones & Bouffard, 2012; Ware, 2006).

For the efficacy construct, emergent coding of specific examples of language and actions of the teacher, as identified by the student, were the critical area of analysis. These examples included the teacher participant's verbalization of efficacy actions and phrases (such as allowing for revision and reflection on mistakes) and classroom and lesson content designs to promote efficacy (Banks, 2015; Bandura, 1977; Bondy et al., 2012; Hammond, 2014; Ware, 2006; Williams & Williams, 2010).

Student interview coding included emergent coding of specific examples of emotional resilience strategies used or communicated by teacher participants, as identified by the student, were the critical area of analysis. These strategies included identification of student emotional baselines, resilience practices, de-escalation practices such as student walkabouts or one-on-one consulting to mitigate negative emotional responses or behaviors, importance on student emotional health, and curriculum influences from SEC. (Chambers & McCreedy, 2011; Cherniss et al., 2006; Elksnin & Elksnin, 2003; Greenberg et al., 2003; Hammond, 2014; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Mowat, 2011; Tobin et al., 2012; Zins, 2000). To provide a visual summary of these codes on student interviews, table 18 is presented below.

Table 18

*Student Interview Coding*

Construct Grouping	Description	Questions in Group	Sample Responses	Emergent Coding
Relationships	Opinions on positive or negative aspects of relationships with teachers.	Main Subset- 3	“She always says hi to me even when I have not been good.”	Detached to shared relationships
		Secondary Subset -3	“I know she likes me.”	Mutual respect
			“He shakes my hand almost every day.”	Control and power structures
			“She asks me questions about my weekend.”	
Efficacy	Opinions on the teachers’ abilities or examples of supporting the students’ efficacy.	Main Subset- 2	“Mrs. [Redacted] always asks another question if you did not get the first one.”	Efficacy lessons
		Secondary Subset -5	“He does not take points off for minor things.”	Low risk environment
			“She doesn’t get mad when I make a mistake and I make a lot of mistakes.”	Control and power structures
Resilience	Students’ opinions on the teachers’ abilities to demonstrate emotional competencies around resilience.	Main Subset- 3	I get stressed out easily and [teacher’s gender redacted]	Emotional Baselines
		Secondary Subset -3	never judges me and just talks to me.”	Curriculum connections
			“We read books about how we feel.”	

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**Professional Development Session Observation Coding.** Observations of a professional development session was conducted by the third party neutral observer. The primary goal of the professional development session was not to provide qualitative data

related to the program impact research questions but evidence of fidelity of implementation and proper alignment of sessions with stated program objectives and goals. As such, the professional development session data were analyzed to provide evidence towards the evaluation question of the research design. Professional development session coding was based on the five fidelity of implementation measures with a specific focus on the controllable measures of session objectives, material alignments, activity applied to the session, participant participation, and participant understanding of session objectives (Dusenbury et al., 2003). All coding for these data was organized around these five fidelity measures and is presented in table 19.

Table 19

*Professional Development Session Observation Coding*

Category Label	Researchers' Description	Fidelity of Implementation Category (Dusenbury et al., 2003)
Session Objectives	Were session objectives clearly communicated during the session?	Adherence to the intervention's critical elements
Material alignment	Were session materials presented aligned with session objectives?	Adherence to the intervention's critical elements
Activity applied to the session	Was an activity or participation based activity provided to participants?	Quality of program delivery beyond basic elements
Participant participation	Did participants actively and completely engage in the session content and activities?	Application of proper dosage
Participant understanding of session objectives	Did participants indicate an understanding of the session objectives?	Quality of program delivery beyond basic elements

## **Analysis and Discussion**

The following section provided for analysis and discussion of results based on these data presented in this chapter. The section was organized around the two research questions and the evaluation review question. In the case of research question one, both quantitative and qualitative data were analyzed using a convergent parallel design (Creswell & Plano Clark, 2011). For research question two, qualitative data from student interviews were used. For the evaluation question, qualitative data of program implementation and quantitative data of internal consistency and reliability were used to focus on fidelity of implementation of the intervention (Dusenbury et al., 2003).

### **Research Question One**

Research question one was “What was the impact of a social-emotional competencies and culturally responsive teaching professional development intervention on teachers’ perceptions of positive student-teacher relationships, student efficacy, and student emotional resilience?” The purpose of this research question was to analyze the impact of the SEC and CRT professional development on the teacher participant group’s perceptions of positive student-teacher relationships, student efficacy, and student emotional resiliency. Because these data expanded to both the perception survey and qualitative observation, this research question was answered using a parallel convergent mixed methods design (Creswell & Plano Clark, 2011). Qualitative observational and program materials data were a synthesis of multiple teacher participant classrooms and multiple teacher participant materials and represent changes for both individual teacher participants and the teacher participant group.



**Student-Teacher Relationships Survey Analysis.** The relationships construct consisted of ten questions with 12 responders ( $n= 120$ ) with a maximum composite value of 50. The relationships construct  $M$  for the pre-test was 39.75 and 46.75 for the post-test which equals to a  $M$  difference of 7 or a 14%. To test the statistical significance of these quantitative data, a MANCOVA test was used between the pre-test and post-test results with a covariant of teacher participant's years of experience. For the hypothesis test, the  $H_0$  = increased educator SEC and CRT professional development will have no impact on teacher perceptions of the variables of positive student-teacher relationships, student efficacy, and student emotional resiliency. The  $H_a$  = educator SEC and CRT professional development will demonstrate a positive impact on teacher perceptions of the variables of positive student-teacher relationships, student efficacy, and student emotional resiliency. The resulting computed  $X^2 = 4.213$  of a required  $X^2 = 19.675$  to demonstrated statistical significance at  $\alpha = .05$ . As such, the MANCOVA did not result in statistical significance and the null hypothesis for all constructs was not rejected. Because these data did not result in a statistically significant rejection of the null hypothesis, additional quantitative data were gathered through the parallel convergent design to effectively examine positive student-teacher relationships and answer research question one. Without statistical significance, supportive qualitative data focusing on positive student-teacher relationships were needed to demonstrate any positive affirmations of research question one. Qualitative data were collected from teacher observations and program materials such as participant journals, lesson materials completed, or other materials collected during professional development sessions.

**Growth from Detached to Shared Relationships.** This section describes the evidence of teacher participants' growth from a detached relationship style to a shared relationship style through a combination of classroom observations and program materials. As was discussed in the literature reviews of this study and the coding discussions in this chapter, evidence of the teacher participants' verbal and physical interactions with students was critical to formation of positive student-teacher relationships (Boykin & Noguera, 2011; Chamber & McCreedy, 2011; Hammond, 2014; Jones & Bouffard, 2012; Ware, 2006). Important to the evolution from detached to shared relationships is a balancing of classroom power dynamics which creates shared community and accountability between teachers and students (Banks, 2015; Bondy et al., 2012; Boykin & Noguera, 2011; Hammond, 2014; Jones & Bouffard, 2012; Ware, 2006). The primary indicator of this evolution from detached to shared relationships was identified as word choice and levels of personalization with students.

**Communication and Word Choice.** Within the classroom observations careful attention was focused on the word choice of teacher participants when interacting with students. In the initial observation, observable and quoted data indicated more emphasis on body language and more general verbalization to students such as "this group," "the class," or "our objective." The general verbalization, while not negative towards students, did not create a level of individualization needed to foster positive relationships with a specific focus on students with social, emotional, or cultural needs (Banks, 2015; Boykin & Noguera, 2011; Hammond, 2014). In the post-observation, these data indicated more emphasis on specific students such as frequent use of "you" and word choice around building student confidence, expectations, and awareness of the students' emotional

interactions with classroom materials such as “It’s important to me you do this step” and “important to me”. These changes in personalization and word choice were connected to specific strategies within the professional development sessions. Table 20 is provided below to summarize the growth in teacher participant communication and word choice between pre-intervention and post-intervention observations.

Table 20

*Communication and Word Choice between Observations*

Coding or Concept	Session Connection	Pre-Observation	Post-Observation
Verbalization	2, 3, 6, 8-10	General or directive	Personalized and shared
Word Choice	2, 3, 6, 8-10	General or directive	Personalized and deliberate to SEC
Respect	8-10	Not observed	Directly observed between teacher and student interactions
Affirmative Communication	6, 7, 8-10	Observed but less frequent (9)	Observed at higher frequency (14)
Positive Interactions	6, 7, 8-10	Not observed	Observed at higher frequency (3)

An example of growth in detached to shared relationships was the pre-intervention and post-intervention observation of a 9th grade English teacher participant’s classroom. This teacher’s pseudonym was Ms. Jones. During the first observation, the classroom climate was off task with students not participating in assigned work and engaging in behaviors off task. The lesson objective for the day was to complete a reading a paragraph to highlight the use of figurative language. There were 16 students in the classroom. Within the 20-minute observation, four students were engaged in the activity with 12 students not engaged. The four students engaged were working independently on the assignment highlighting passages within a collection of photocopied materials. The off task students were using cellphones, engaging in conversations about a

video game, and in various configurations including individually looking at cellphones or talking in groups of two to three students. Of the 12 students, three students did not have any materials on their desks. Ms. Jones was rotating throughout the class to students and constantly repeating directives for students to get on task and do the work. This included consistent reminders of what the assignment was and how many points the assignment was worth for the students' grades. Ms. Jones showed signs of exasperation and frustration by pacing throughout the room and frequently repeating directives to the off tasks students including "be quiet" and "get to work now" with minimal to no response from the students. The repeating of impersonal directives to control classroom climate resulted in an unbalance and authoritative power structure without evidence of positive, shared relationships between the teacher and the students (Banks, 2015; Bondy et al., 2015; Boykin & Noguera, 2011; Ware, 2006).

During the post-observation in the same classroom, a more positive move towards shared relationships was noted. The Ms. Jones greeted students at the door with use of student names and conversations outside of the day's content objectives such as student's interest and engagement in extracurricular activities. Positive and affirmative language directed at students included personalization of requests including "I need you all to look at this example" as opposed to the directive based language used in the pre-intervention observation and rationalizations regarding lesson content including "It is important to me that we have a great conversation about the book today because this is a really enjoyable chapter" which improved student behaviors and engagement in the lesson. Ms. Jones used increased close proximity and engaged in frequent one-on-one conversations with students as opposed to the general and impersonal directives from the first observation.

She maintained a consistent tone in both speaking to the whole class as well as to individual students. The design of the lesson was also complimentary to forming relationships and community learning through a discourse-based discussion of the character's culture with 12 of the 14 present students engaged in the activity. The post-intervention observation indicated an increase in relationship building, direct actions by the teacher, and communal opportunities built into the lesson design that confirmed the development of a shared relationship between the student and teacher as designed within the materials of the professional development intervention.

In addition to the teacher participant group classroom observations, data collected and analyzed through program materials also provided convergent data on the teacher participant group's perceptions of positive student-teacher relationships. Quotations from these materials included teacher reflection on the importance of positive student-teacher relationships including "Mutual respect is tough but very important" and challenges to forming relationships such as "Relationships can be difficult to read at first so you have to be cautious but also build the trust." These quotations demonstrated both acceptance of the value of positive student-teacher relationships (such as understanding student struggles outside of the classroom, the value of effective communication with students, and the importance of trust) as well as indicated a self-reflective position from the teacher participants on both the difficulties of forming positive student-teacher relationships and the phenomenological importance of forming these relationships. Within these program material data, no teacher participants indicated negative or dismissive reflections on the importance of relationships and reflections were either complimentary to relationships or reflected on the challenges of forming relationships with some students. More so than

classroom observational data, these program materials data provided a richer reflection on the importance and nature of relationships and the professional development goals.

**Reflections on Growth from Detached to Shared Relationships.** In addition to growth in the quality of relationships, data related to an increase in teacher participants' reflections on the importance of relationships was a critical element of the research question. To provide evidence of this element, evidence was collected from the qualitative nature of the perception survey and program materials to establish a baseline view and increase in reflections on the importance of relationships. The purpose of these data are to demonstrate that teacher participants recognized the importance of positive student-teacher relationships, recognized the value of professional development training in relationships, and reflected on their practices in forming relationships. These data require the establishment of factual and counterfactual states before and after the intervention implementation to demonstrate increases in these reflections and implementations regarding relationships.

**Survey Results as Pre and Post Relationship Perceptions.** While the teacher survey data did not produce statistically significant results, these survey data, from a descriptive perspective, triangulated with qualitative reflection evidence to demonstrate growth in the teacher participant group's perceptions of relationships. In the survey, items three, seven, and eight asked teacher participants to expand reflection beyond engagement in positive relationships to why they engage in positive relationships. All items used a Likert scale (5= strongly agree to 1= strongly disagree).

Item three asked the respondent if they felt students valued relationships with teachers. This inversion of questioning asked respondents to reflect on the students'

valuing of relationships. While not as drastic of a change as items seven and eight (Pre- $M=4.00$ /Post- $M=4.75$ ), item three included three respondents who strongly disagreed with this statement in the pre-test survey to no responses of strongly disagree in the post-test survey. Strongly disagreeing with this statement indicated that these three respondents did not view relationships as shared relationships and were not reflective on students' perceptions of the relationships which was not found in the post-test results indicating a realignment of perceptions for these participants.

Item seven asked respondents if positive relationships help bring teachers and students of different races, cultures, and backgrounds have more empathy and understanding of each other. The change in item  $M$  between pre-test and post-test was notable (Pre- $M=3.92$ /Post- $M=4.75$ ) with five respondents indicating strongly disagree in the pre-test survey and no respondents indicating strongly disagree or disagree in the post-test survey. Strongly disagreeing with this statement indicated that these five respondents did not view relationships as part of an empathetic process aligned with values of cultural proficiency and shared experiences. While the pre-test results were submitted prior to the intervention, an important note is that cultural proficiency is included in the district's professional growth and evaluation system and is consistently communicated outside of this study. These strongly disagree responses were not found in the post-test results indicating a realignment of perceptions for these participants.

Item eight asked respondents if positive relationships between teachers and students helps reduce negative student behaviors. The change in item  $M$  between pre-test and post-test was notable (Pre- $M=3.42$ /Post- $M=4.67$ ) with five respondents indicating strongly disagree in the pre-test survey and no respondents indicating strongly disagree in

the post-test survey. Based on the matched pairs, these five respondents also indicated strongly disagree on item seven. Strongly disagreeing with this statement indicated that these five respondents did not view relationships as a mutual and shared relationship to foster respect and understanding to mitigate negative behaviors. Strongly disagreeing with this statement established a hierarchical power structure within student-teacher relationships with the teacher maintaining power. These strongly disagree responses were not found in the post-test results indicating a realignment of perceptions for these participants.

**Triangulated Reflection Data.** Rich and reflective examples of teacher reflections on the importance of relationships were required to support the theme that teacher participants recognized the importance of positive student-teacher relationships, recognized the value of professional development training in relationships, and reflected on their practices in forming relationships. This rich discussion was found in the teacher participant groups' responses to journal reflections found in the program materials.

During session six, the session explicitly focused on developing strategies for positive student-teacher relationships, a journal reflection prompt was completed by the teacher participants focusing on the quality of relationship with a focus student including successes and challenges to the relationship. The word choice for this prompt was intentional designed to elicit reflection on a relationship with a specific student and for the teacher participants to reflect on the nature of challenging student-teacher relationships (Banks, 2015; Boykin & Noguera, 2011; Hammond, 2014).

A 10th grade English teacher's (provided the pseudonym of Ms. Smith) response was particularly rich and informed:



I have always known in my mind that relationships were important. It never felt like a strategy or anything required as a professional. It was just common sense that my students needed to respect me and I needed to respect them. I never thought it was something we could teach teachers. I was a nice teacher and others were more stern and not as friendly. I think back to my teachers and some were nice and others were mean. It was the natural order of things in a school...Working with [redacted student] and hearing about these theories has me thinking that this is something we can teach all teachers and not just something people are born with.

Ms. Smith went beyond the established questions to reflect on the general importance of forming positive relationships with students in need. This response illuminated her recognition of the value of positive student-teacher relationships and affirmed the importance of the professional development intervention. She identified a paradigm shift regarding relationships from a personal act to a teachable professional development strategy with set parameters and outcomes (Banks, 2015; Boykin & Noguera, 2011; Ware, 2006). This level of reflection about the importance of relationships indicated Ms. Smith engaged in reflection on the nature of student-teacher relationships but also engaged in meta-analytical reflection on why this professional development topic was important to all school staff.

**Final Analysis of Relationship Construct of Research Question One.** While one piece of these data for the relationship construct does not provide an answer for research question one, a convergence of these data allows for a richer conversation on the growth in the teacher participant groups' perceptions of the importance of student-teacher

relationships due to the professional development intervention. Inferential testing of the quantitative survey data did not produce statistical significance which required a triangulated support from qualitative data which did provide evidence of a positive growth of the teacher participant groups' perceptions of relationships. Within the qualitative data, the value of building positive student-teacher relationships and the importance of developing professional development training to provide additional teachers with these resources was an important level of reflection. While the relationship construct of research question one did not produce objective quantitative evidence of statistically significant growth due to the professional development intervention, the descriptive statistics and qualitative evidence did produce exploratory evidence of an increase in teacher perceptions of relationships and supports continued research into the construct.

**Student Efficacy Survey Analysis.** The student efficacy construct consisted of nine questions with 12 responders with a maximum composite value of 45. The student efficacy construct  $M$  for the pre-test was 25.42 and 35.33 for the post-test which equals to a  $M$  difference of 9.91 or a 22% increase from the pre-test to the post-test for this variable. However, as stated in the previous section, the MANCOVA inferential test resulted in a computed  $X^2 = 4.213$  of a required  $X^2 = 19.675$  which resulted in a lack of statistical significance and the null hypothesis for all constructs was not rejected. Because these data did not result in a statistically significant rejected of the null hypothesis, additional qualitative data were required through the parallel convergent design to effectively examine research question one. Without statistical significance, supportive qualitative data focusing on teacher's perceptions of the importance of student efficacy

were required to demonstrate any evidence of the construct within research question one. These qualitative data were taken from the teacher observations and artifacts collected during the professional development sessions.

**Use of Specific Efficacy Strategies in the Classroom.** As was discussed in the literature reviews and the coding discussions in this chapter, evidence of the teacher participants' use of explicit efficacy strategies towards students were critical to this construct's indicators (Bandura, 1977; Bondy et al., 2012; Hammond, 2014; Ware, 2006; Williams & Williams, 2010). These strategies focused primarily on encouraging no or low risk student reflection and self or peer correction by the teacher participants in the classroom. These data were captured through the two classroom observations and through program materials completed as part of the professional development sessions.

Encouraging no or low risk student reflection and self or peer correction were identified during the professional development intervention as important strategies for increasing student efficacy and coded as such in the classroom observations and program materials collected. Student reflection and self or peer correction were observed through classroom observations as well as supported through existing research with a focus on interconnection with positive student-teacher relationships and culturally responsive practices (Banks, 2015; Bondy, et al., 2012; Boykin & Noguera, 2011; Chamber & McCready, 2011; Greenberg, et al., 2003; Hammond, 2014; Jennings & Greenberg, 2008; Jensen, 2009; Jones & Bouffard, 2012; Tobin, et al., 2013; Ware, 2006; Williams & Williams, 2010).

Within the classroom observations, careful attention was given to the specific strategies and lesson design in the development of student efficacy including the

development of no or low-risk classroom climates and opportunities for self or peer correction. No evidence or examples of teachers encouraging student reflection and only one example of student self or peer-correction were noted in the pre-intervention classroom observations. In post-intervention classroom observations, evidence of encouraging a no or low-risk classroom environment were found in actions and quotations by the teachers including speaking to a student one-on-one about errors instead of a whole class audience which created a less public venue for the discussion of mistakes (Bondy et al., 2012; Ware, 2006). Additionally, two examples of specific lesson design around student self or peer-correction were noted in the post-intervention observation with one entire class model of peer-to-peer review of a writing sample and one example of discourse-based discussion by student groups of two or three students in which a student was identified with the role of editor to ensure the group was proceeding with the assignment properly. As Bondy et al. (2012) and Hammond (2014) note, this shift in power dynamics and student-led learning increased perceptions of the importance of their learning to increase confidence and engagement. While not noting the amount of examples of the relationship construct, the growth in observable actions and lesson designs between the pre-intervention and post-intervention observations was noted and further explored through the professional development program materials analysis.

Data collected and analyzed through program implementation and program artifacts provided convergent data to the observation data on the teacher participant groups' perceptions and application of student efficacy. Quotations from these participant artifacts included reflections on the emotional competencies needed to recognize low student efficacy such as "When the student says 'When I mess up it is all my fault' is a

time to support him,” the connections between relationships and efficacy such as “Getting to know the students helps you encourage them to work,” and creating low risk or low judgement classroom climates to promote efficacy such as “There are many students playing fronts or roles. You have to see through that and find actual ability.”

While classroom observation data demonstrated some application of student efficacy strategies, these quotations expanded the teacher participant group’s understanding of the importance, difficulties, and reflections on student efficacy and reflections on how the teacher participants interacted with specific students or classes to encourage student personal beliefs. A reflection on the importance of student efficacy was further explored in specific reflections by the teacher participant group.

**Reflections on the Importance of Efficacy.** Similar to the relationship construct, recognition of the teacher participant groups’ reflections on the importance student efficacy and the value of developing strategies to increase student efficacy were critical to understanding changes in teacher perceptions of student efficacy. Rich and reflective examples of teacher reflections on the importance of efficacy were found through professional development program materials with a special attention to participant journaling.

During session one of the professional development intervention, teacher participants were asked to define their prior knowledge of the critical terms and constructs of the professional development intervention including efficacy. This prompt was asked as the second agenda item of the session after an introduction to both the session agenda and a brief overview of the entire professional development sequence. Therefore, participants had not received any instructions or research-based definitions of

any terminology for the sessions. Participants were asked to provide a working definition of the term from their knowledge and a strategy or action they would take to implement the term in the classroom. As opposed to relationships and social-emotional wellbeing, the participants struggled with providing an exact definition of efficacy or to identify strategies connected to efficacy. Table 21 below captures several examples of the participants' responses to both the working definition prompt and the strategies prompt.

Table 21

*Responses to the Efficacy Prior Knowledge Prompt*

Definition Response	Strategies Response
I think it is how students feel about themselves.	I don't [sic] know.
Student feelings	Not sure
Feelings of self worth	Building relationships
Not sure	Not Sure

The range of responses above varied from no knowledge to combinations of concepts from other constructs such as relationships and SEC. These examples established a baseline knowledge of efficacy and minimal reflection of strategies prior to the implementation of the professional development.

During session five, participants reviewed a scenario of a student with identified low efficacy. The scenario was an originally created scenario and was not based on any specific student or identifiable trait. The scenario prompt was:

Emmanuel is a 9<sup>th</sup> grade student who is considered an average, quiet performer in English. He will answer when called upon but does not like to volunteer. His mother and father are divorced and he does not like to speak about his father. While not confirmed, there is evidence his father physically abused either him

or his mother. In English class, Emmanuel is asked to read a story with an abusive father. He begins reading the story and immediately shuts down.

When prompted to finishing reading and complete the assignment, he says “No, just give me a zero. Fail me for the whole class. I don’t care” and immediately puts his head on his desk.

The scenario contained several critical elements of low student efficacy identified by Farrington, et al. (2011) and Hammond (2014) for students with noncognitive or sociocultural stressors such as reluctance to participate, triggers from classroom materials, and self-deprecation. Participants were asked to respond to the following prompt based on this scenario: “As Emmanuel’s English teacher, what are three questions or phrases you would say to him to engage his sense of efficacy and/or emotional resilience?”

The response by a special education co-teacher, provided the pseudonym of Ms. Johnson, who supports the 9<sup>th</sup> grade English classes. Ms. Johnson indicated on the prior knowledge assessment that efficacy was defined as “I think it is how students feel about themselves” and “I don’t [sic] know” in regards to strategies which indicated minimal understanding of efficacy and no understanding of strategies. Her response to the prompt included a rich discussion of both strategies and personal reflection:

First of all, if Emmanuel “shut down” when reading something that highly charged, I wouldn’t [sic] prompt him in front of the class “to finish reading.”

That seems like a setup. I’d [sic] talk to him privately and gently and say, “You were doing a great job reading today, but I noticed that you didn’t [sic] want to continue reading. Was there something particularly troubling to

you about the story? Something is standing in the way of your learning, and together we need to figure out what that is”...I raised a son who was also a student at [school district name redacted] a while ago. Like you, he was smart, and learning in school generally came easy to him until it didn’t. Then he told me he felt dumb. That broke my heart because he wasn’t [sic] dumb. You see, the thing is, from high school on, everything is new; no more review like in middle school, and learning takes effort, hard work. But he eventually got it: he now has a successful life and a career he loves. I see that for you, too.

In addition to the emotional reflection and references to the participant’s own life, this reflection highlighted the importance of specific efficacy strategies such as one-on-one conferencing and specific positive reinforcement of abilities (Bondy, et al., 2012; Greenberg, et al., 2003; Hammond, 2014; Ware, 2006; Williams & Williams, 2010). Ms. Johnson’s response also synthesized aspects of both the relationship and resilience constructs by balancing power structures through creating dialogue with the student, relating personal emotional interactions with the student, and created clear empathy for the student’s needs. Although a reflection and not a specific classroom action, her response demonstrated both an understanding of strategies to build efficacy in a reluctant student and a recognition of the importance of student efficacy through their discussion of both strategies and reflections on the emotional impacts on the student. When compared to the participant’s initial response, this response contained a greater reflection on the importance of developing efficacy strategies. While it did not contain an exact definition of efficacy for comparison (which was not requested in the prompt), the rich



exploration of efficacy strategies in the response demonstrated the participant's growth in understanding the importance of efficacy.

**Final Analysis for Efficacy Construct of Research Question One.** As with the relationship construct, one piece of these data did not provide an answer for research question one and required a convergence of these data. While inferential testing of the quantitative survey data did not produce statistical significance, the qualitative data for the efficacy construct did provide evidence of a positive growth of the teacher participant groups' perceptions of efficacy with special attention to strategies and the interconnected nature of efficacy to other constructs. Unlike the relationship construct, the participants' baseline knowledge of efficacy and strategies was lower so greater growth was seen in the qualitative reflections on the session scenario. While the efficacy construct of research question one did not produce objective quantitative evidence of statistically significant growth due to the professional development intervention, the qualitative evidence did produce promising evidence of an increase in teacher perceptions of efficacy and supports continued research into the construct.

**Student Emotional Resilience Survey Analysis.** The emotional resilience construct consisted of 11 questions with 12 responders ( $n = 132$ ) with a maximum composite value of 55. The  $M$  for the pre-test was 37.67 and 48.52 for the post-test which equals to a  $M$  difference of 10.91 or a 19.83%. As with the other two constructs, the MANCOVA inferential test resulted in a computed  $X^2 = 4.213$  of a required  $X^2 = 19.675$  which resulted in a lack of statistical significance and the null hypothesis for all constructs was not rejected. Because these data did not result in a statistically significant rejected of the null hypothesis, additional qualitative data were required through the

parallel convergent design to effectively examine construct one and answer research question one. These qualitative data were taken from the teacher observations and artifacts collected during the professional development sessions.

**Developing Resilience Strategies in the Classroom.** As was discussed in the literature reviews and the coding discussions in this chapter, evidence of the teacher participants' use of explicit emotional resilience strategies towards students were critical to this construct indicators (Cherniss et al., 2006; Elksnin & Elksnin 2003; Greenberg et al., 2003; Jennings & Greenberg, 2008; Jones & Bouffard, 2012; Zins, 2000). These strategies included identifying student emotional baselines and using emotional aware curriculum materials as part of lesson designs. These data were captured through the two classroom observations and through program materials completed as part of the professional development sessions.

**Emotional Baselines.** The primary actionable student emotional resilience strategy observed through teacher participant group classroom observations was emotional baselines or awareness of a student's every day emotional reactions to issues as to identify signs the student might have heightened emotional reactions without requiring frequent questioning of the student (Greenberg et al., 2003; Jennings & Greenberg, 2008). An important note regarding teacher participant group observational data was that the positive student-teacher relationship data connected to positive communication, interactions, and respect provided secondary evidence support for student emotional resilience. For the purpose of exploring the student emotional resilience construct in depth, evidence of explicit use of emotional baseline strategies was explored with an underlining assumption observational data from relationships supports

these emotional baseline data as well. As with the efficacy construct, the pre-intervention observation captured no evidence or examples of teachers using emotional baseline strategies. The post-intervention observation indicated three examples of teachers using emotional baseline strategies. Evidence was found in captures of specific dialogue between the teacher and students within the classroom. Quotations included recognizing differences in actions such as “You ok back here? You normally do not sit back here. Everything ok?,” applying emotionally aware word choice to interactions including “It feels great to get it right,” and general emotional awareness of the classroom setting such as “How are you all doing.” These quotations from the teacher participant group indicated the participants were both verbalizing strategies regarding emotional baselines to students and intentional in the word choice such as “everything ok?” and the use of qualifiers for why they are asking, or statements encouraging self-reflection. The precision in word choice demonstrated active engagement in the student resilience materials as presented in sessions two, three, and six of the professional development intervention.

Selection of content and curriculum materials supports SEC and CRT within classrooms with special attention to emotional baselines (Hammond, 2014; Jensen, 2009; Jones & Bouffard, 2012; Ware, 2006). Within the context of emotional baselines, social-emotionally and culturally aware content and curriculum materials, as evidenced by observation in teacher participant classrooms and reflections on specific literature selections through program artifacts, increased levels of emotional reflection, communication, and coping for students and provided teachers with opportunities to increase these opportunities in the classroom (Hammond, 2014; Jones & Bouffard, 2012;

Ware, 2006). For example, a 10 grade English teacher with the pseudonym of Mr. Taylor was observed having students complete a worksheet focusing on style improvements in writing that did not contain rich discussions of emotional baselines despite the writing prompt focusing on a character's response to seeing his wife after a long period of separation. In the post-intervention observation, Mr. Taylor engaged students in a guided Socratic-style discourse activity over the death of the narrator's family member in a literary work. From the post-intervention observation, Mr. Taylor asked specifically: "what can we learn from James' experiences narrating his mother's funeral about how we grieve?" which included a student response of "when we share how sad we are it can help us because others can give us tips on how to deal with it like how James' friend talks to him." Other observed post-intervention data included classroom activities such as watching a short film regarding making fun of others' differences and subsequent discourse discussion about the film. Additionally, specific quotations from teachers to students provided evidence of content and curriculum connections and emotional baselines such as connecting emotional awareness with specific classroom materials such as "It can be emotional when we respond to a poem" and incorporating emotional awareness into literary analysis such as "What do you think he was feeling when he wrote that?" These specific curriculum and lesson design opportunities witnessed during observations demonstrated the teacher participant groups' explicit referencing to emotional baselines and also implicit exploration through content materials and lesson designs as promoted by the professional development intervention.

**Increased Perceptions and Knowledge of Efficacy.** Data collected and analyzed through program implementation and materials also provided convergent data to the

observation data on the teacher participant group's perceptions of student resilience. These program materials data were collected during the professional development sessions including scenario responses, program video notes sheets, and session exit cards. Quotations from these materials included recognizing student emotional baselines such as "students often come in already agitated by things that happened in the morning," recognition of noncognitive or extra-classroom impacts on students and student willingness to engage including "you never know what happened before class or last night," and classroom power dynamics such as "if you make it about power, you will lose the kid." These quotations from the teacher participants demonstrated a deeper understanding of why emotional resilience was an important strategy for the classroom by reflecting on the impact of noncognitive, sociocultural, and social-emotional stressors on classroom performance. This reflective understanding of the role of student emotional resilience was indicative of attention to the emotional resilience construct. This deeper understanding of student emotional impacts and the importance of emotional resilience was a primary goal of the construct and increasing the teacher participant group's perceptions of why this construct was critical for classroom implementation.

**Reflections and Action on Resilience.** Similar to the teacher participant groups' perceptions of positive student-teacher relationships, rich and reflective examples of teacher reflections on the importance of resilience were found in the teacher participant groups' responses to program materials provided rich and reflective evidence on the importance of resilience. Of particular note was a journal reflection in which the participants were asked to reflect on the emotional baselines of their targeted student with foci on identifying the emotional baseline and identifying positive and negative impacts.

Within the responses were two of special note, Ms. Jones and Ms. Johnson's responses were both rich and developed a linear progression of skills in the case of Ms. Jones and the level of reflection for Ms. Johnson. Ms. Jones responded to the prompt as:

My student is impacted both by school and everything outside of school.

[Student's name redacted] acts out for the attention of his peers and when I talked to him about it, he tells me that being funny gets people to like him. In a class assignment, he wrote about being bullied at his previous school and how his parents told him to just deal with it. I was really taken back by this.

I talked to him about his past and how he is now at [school name redacted] and we had a great conversation.

Using the previously discussed pre-intervention observational data as an example of this participant's reflections on both relationships and resilience, Ms. Jones' reflection demonstrated sizable growth in their reflection abilities on working with challenging students. Her response contained the participant's recognition of both in class and noncognitive or sociocultural stressors impact on the student's emotional baseline. She also interwove aspects of relationships and resilience when she leveraged their relationship with the student to extrapolate more information on his emotional baselines and reasoning for the baseline. Her use of classroom activities or curriculum materials created a conduit for the student to express emotional baseline evidence which the participant used to facilitate a conversation and strengthen the relationships.

The Ms. Johnson responded to the prompt as:

It is so important we are having these conversations. Emotional health has always been important for both students and teachers...When we

discuss IEPs [Individual Educational Plans], we ask questions about the student's emotions. Why do we not do this for all students?

While Ms. Johnson's response does not have the rich discussion of strategies as Ms. Jones' response, her response was isolated to demonstrate the recognition of the importance of resilience and emotional wellbeing as a professional development strategy for teachers. This response coordinated with Ms. Jones' response to demonstrate both the participant groups' implementation and reflection on resilience strategies and recognition of the importance of the topic for on-going professional development.

**Final Analysis for Resilience Construct of Research Question One.** As with the relationship and efficacy constructs, one piece of these data did not provide an answer for research question one and required a convergence of these data. While inferential testing of the quantitative survey data did not produce statistical significance, the qualitative data for the resilience construct did provide evidence of a positive growth of the teacher participant groups' perceptions of resilience with special attention to the growth of the 9<sup>th</sup> grade English teacher through their pre-intervention observation and the rich detailed reflection provided in discussion of their focused student and the classroom climate. While the efficacy construct of research question one did not produce objective quantitative evidence of statistically significant growth due to the professional development intervention, the qualitative evidence did produce exploratory evidence of an increase in teacher perceptions of efficacy and supports continued research into the construct.

**Research Question One Final Analysis.** The purpose of a convergent parallel mixed methods design was to propose complimentary data on the same construct and to

provide overlapping support of quantitative data with qualitative data (Creswell & Plano Clark, 2011). The quantitative data in the study revealed a lack of statistical significance after conducting the MANCOVA test.

Using a convergent parallel design, these descriptive statistical data and qualitative observation data provided parallel support to research question one even though quantitative data lacked inferential statistical significance. When combined with each other, these three data sources cannot positively affirm a positive growth in the teacher participant group's perceptions of the three constructs due to the lack of statistical significance within quantitative data. As will be discussed in the limitations section of this chapter, the small sample size and lack of control group limited the statistical power and inferential testing options for the quantitative data. While research question one cannot be positively affirmed without statistically significant quantitative data, qualitative data did demonstrate participation, reflection, and the verbalization of the importance of the three constructs by the teacher participants. The final conclusive statement regarding research question one was that quantitative data did not show statistically significant changes in teacher's perceptions of the three constructs, but descriptive statistical data and qualitative data did provide a parallel convergent data source that participants did interact with materials and demonstrate evidence of increased awareness of the three constructs. Given the exploratory nature of this professional development and research design, these initial findings for research question one did provide evidence for a continuing conversation on the importance of SEC and CRT professional development and further exploration into the noncognitive or sociocultural aspects of the achievement or opportunity gaps.



## **Research Question Two**

Research questions two was “What was the impact on students within the teacher participant group’s classes understanding of and ability to provide examples of positive student relationships, student efficacy, and student emotional resilience?” As will be discussed in the limitations section of this chapter, data which supported transferability and a causal relationship between the teacher participant group’s professional development and student group’s academic achievement were not collected through this research design. The purpose of research question two was to create an initial inquiry into student recognition of the three constructs of the research design (positive student-teacher relationships, student efficacy, and student emotional resilience) as well as provide additional expansive evidence of the teacher participant group’s interactions and implementation of program materials by providing another participant voice to the research design.

The data collected for research question two were from student interviews. Interview data were analyzed by the three construct variables to identify emergent themes within the students’ responses. No quantitative data were collected from students and no control group of students existing in a counterfactual condition was included. Although an analysis will be provided for research question two below, any positive conclusions on the impact of the teacher participant group professional development intervention’s impact on the student group was limited and presented without statistical causality due to the absence of quantitative student data.

**Relationships Student Interviews Results.** A subset of three student interview questions explicitly asked students to address specific examples of the relationship built

between the student and her/his teacher. Three other questions included topics (emotional support, caring) which were also included on the periphery of the relationship grouping. Quotations from the student interview questions included “She always says hi to me even when I have not been good,” “I know she likes me,” “He shakes my hand almost every day,” and “She asks me questions about my weekend.” These student quotations demonstrated an awareness within the students of the teacher participant group’s physical (i.e. hand shaking, questioning), non-judgmental mindset such as “She always says hi to me,” and specific word choice (i.e. questions about outside activities, affirmative statements) as convergent with the strategies focused on in the professional development intervention and implemented within the classroom.

While student interview responses did not contain the rich level of depth as the teacher reflections and responses, one 9th grade male student, provided with the pseudonym of Alex, did provide several clear comments on the relationship formed with his teacher. Alex was chosen by Ms. Jones as her focus student during the intervention. When asked how Ms. Jones built a relationship with him, the student responded:

Ms. Jones always asks me how I am doing and asks me questions about me. That really matters to me and not a whole lot of teachers do that...I get stressed out easily and she never judges me and just talks to me.

Alex’s response indicated he is aware of his teacher’s abilities to form relationships with him as well as the teacher’s understanding of his emotional baselines in forming the relationship (Hammond, 2014; Jones & Bouffard, 2012; Ware, 2006). His response also demonstrated Ms. Jones’ willingness to balance power dynamics between the student and teacher to facilitate better communication and empathy. When triangulated with Ms.

Jones' observational data and program materials response, Alex's response provided evidence of the teacher's gained skills in relationship development as a result of the professional development intervention at a level recognized by a student.

These student quotations complemented the qualitative evidence that the teacher participant group implemented strategies from the professional development intervention at a level which was visible to students within the classroom. While not statistically proven and inferentially conclusive, these qualitative data represented a beginning analysis that students recognized changes within their teachers' relationships and demeanor with specific strategies used within the intervention.

**Efficacy Student Interviews Results.** A subset of two student interview questions explicitly asked students to address specific examples of the efficacy strategies communicated by her/his teacher. Additionally, five other questions included topics (emotional support, relationship, caring) which were also included on the periphery of the efficacy grouping. Quotations from these students included "She always asks another question if you did not get the first one," "He does not take points off for minor things," and "She doesn't get mad when I make a mistake and I make a lot of mistakes." While these quotations provided evidence of the student group's recognition of efficacy strategies, a rich response at the level of the relationship construct above was not found. This correlated with the nature of efficacy strategies which are often based in lesson design and opportunities created by the teacher and not as readily recognized by the student (Hammond, 2014).

As with the relationship construct, these student quotations demonstrated an awareness of the teacher participant's verbalization of efficacy actions and phrases (such

as allowing for revision and reflection on mistakes). These student quotations support the qualitative evidence that the teacher participant group implemented strategies from the professional development intervention at a level which was noticed by students. Although quantitative data were not gathered, students recognized the existence of or changes within her/his teachers' efficacy moves as communicated through the intervention.

**Resilience Student Interviews Results.** A subset of three student interview questions explicitly asked students to address specific examples of the emotional resilience strategies communicated by her/his teacher. Additionally, three other questions included topics (relationships and cultural contexts) which were also included on the periphery of the efficacy grouping. Quotations from these groupings included "I was one time feeling bad. Just bad because. And she said it was ok for me to walk around some. I know I stayed out of the class longer than I should but it helped" and "We read books about how we feel".

While containing fewer direct examples than the relationships and efficacy constructs, these quotations were very precise in describing specific emotional baseline and resilience practices recognized by the student. These practices included deescalating practices (such as allowing the student to walk around), importance on student emotional health, and curriculum influences from SEC (Hammond, 2014; Jensen, 2009; Jones & Bouffard, 2012; Ware, 2006). Additionally, a 10<sup>th</sup> grade female student, provided with the pseudonym of Sally, provided a richer response to the question "Has your English teacher explicitly discussed emotions and how to cope with bad emotions or feelings at any point in the year? If so, how did he or she do it?" Sally's response was:

My uncle moved in September and he was like my dad since I was young.

I was very upset and she [teacher] told me a story about her father having to move across the country. She always listens to me.

Sally's response indicated the teacher participant was both willing and capable of using empathy, active listening, and sensitivity to the student's situation. These strategies were discussed throughout the professional development sessions and the student's quotation provides evidence of transferability from the sessions to the teacher participant's classroom at a level identifiable by the student.

**Research Question Two Final Analysis.** Student interview qualitative data provided examples of each construct emerging from student quotations. These data provided emergent evidence for an initial indication that students did acknowledge the importance of the three measurable outcomes of the study (positive student-teacher relationships, student efficacy, and student emotional resilience) and provided evidence of how teacher participants demonstrated these constructs at a level identifiable to students. However, further research would be required to better demonstrate a causal relationship between teacher participation in the professional development intervention and perceptual or academic increases within a student group. As such, research question two was answered with caution that an emergent or low impact may be emerging within student interview data of recognition of the three constructs and that the teacher participants did engage with students using strategies learned from the professional development intervention. Any answers for this research question above this emergent impact statement would require larger student groups and additional quantitative student data to isolate and analyze any transferability between teacher participant and student group perceptions.

## Evaluation Question

The evaluation question was “To what degree of fidelity was the professional development intervention implemented and did teacher participants interact with and participate in the professional development intervention focusing on increasing social-emotional competencies and culturally responsive teaching?” The purpose of this evaluation questions was to ensure teacher participants were not only interacting with intervention materials but contributed in meaningful ways to the experience. The primary purpose of this evaluation questions was to ensure fidelity of implementation (Dusenbury et al., 2003) of the professional development intervention especially with regards to any future replication. Data for the evaluation question related to fidelity of implementation were qualitative and were analyzed using Dusenbury et al.’s (2003) five indicators of fidelity of implementation.

**Qualitative Indicators of Fidelity of Implementation.** The qualitative data for the evaluation question in regards to fidelity of implementation were collected from the professional development sessions observation and the program materials. Fidelity of implementation analysis was limited only to observations and materials collected through the professional development sessions and not through teacher classroom observations or student interview data. These two data items directly linked to the degree at which participants interacted with materials and if fidelity was maintained in these interactions.

For the professional development observation, data were organized in category labels: session objectives, material alignment, activity applied to the session, participant participation, and participant understanding of session objectives (Joyce and Showers 2002; Malu, 2015). These data were collected through a neutral third party observation of

a professional development session. The observer was not part of the intervention and did not participate in any sessions outside of the observed session. The neutral observer was provided the professional development observation tool in advance and was invited to ask the researcher questions regarding the tool but was not coached on use of the tool. The neutral observer did not ask any questions prior to performing the observation. The observation was not announced to the program facilitators or the participants. The inductive conclusion of these data was that evidence of each of these category labels would indicate both proper implementation of the professional development materials and active, informed participation by the participants. These professional development session observation data confirmed an acceptable degree of participant interaction and provided evidence for a positive affirmation of implementation of the professional development objectives and materials.

For successful implementation of the intervention, the session observed must meet the first two requirements of a clearly written objective and adherence to the objective through program materials and activities. An objective was noted by the observer and was posted electronically and communicated verbally by the program facilitator as “participants will be able to define democratic firmness, identify critical indicators of democratic firmness, and apply democratic firmness strategies through classroom scenarios.” The second requirement for successful implementation and adherence to program was proper alignment of session materials to the session objective. Materials observed defined democratic firmness along with a discussion of a classroom scenario where a specific student was supported through democratic firmness approaches.

Therefore, materials were aligned with the stated objective and participants engaged in materials and activities aligned with the objective.

The third requirement was an activity to demonstrate application of knowledge provided to the participants during the observed session. The objective of the session was for participants to define democratic firmness and apply strategies to a scenario. The participants were observed viewing a video from Teaching Tolerance (Teaching Tolerance, 2008) regarding democratic firmness and capturing key identifiers of a warm demander as identified by Bondy et al. (2012) and Ross et al. (2008). These responses on the notes sheet were included and analyzed as part of research question one in addition to the evaluation question. Additionally, participants discussed a student scenario to apply democratic firmness principles to a classroom-based scenario. Participants both applied knowledge to the notes sheet gathered at the conclusion of these PD sessions and applied the knowledge through a student scenario therefore affirming this requirement.

The fourth requirement was active participant participation in session materials and engagement in the objective goals. Participants were observed capturing democratic firmness indicators from the video. The observer noted “All members watched the video and actively took notes on the capture sheet.” The responses for the democratic firmness video were directly connected to the session objectives by specifically asking the participants to provide an individual definition of democratic firmness and prepare an example or scenario from her/his experiences in which they used democratic firmness or could have used the strategy. Additionally, participants engaged in the discussions regarding application of democratic firmness principles to both a classroom-based scenario as well as their own practice and class rosters and dynamics. Because session



materials were connected to engagement with the objective goals and the observer noted full participation, the participants met the requirements for participation in the session observed.

The fifth requirement was evidence of participant understanding of session objectives. The session facilitator was observed asking participants to share connections to her/his own practice to the content of the video therefore demonstrating both an understanding of the definition of democratic firmness and application within a classroom setting. The observer noted regarding participant understanding “The session leader facilitated each member of the team sharing a connection in their own practice to the content of the video. Specifically then, from the facilitator, How would we take this information and use it individually with our three students?” and each member responded. “This evidence from the observer connected the facilitator to discourse among participants about both the definition of democratic firmness and practical applications within the classroom by facilitating a whole group discussion. The observer noted that all participants shared an answer when prompted by the facilitator. The observer noted “All participants provided an answer with two participants providing lengthy explanations of using democratic firmness to deescalate a difficult afternoon class. One participant noted she had been using some of these strategies already but did not know the name and would continue using them along with new strategies learned.” These data provided evidence of participant understanding of session objectives by engaging all participants in a discourse focusing on democratic firmness as a concept and also through application to either experienced or hypothetical applications of the concept in the classroom. Additionally, these data demonstrate connections made by participants to previously held knowledge

and strategies and a willingness to continue using the strategies per the stated objective of the session.

Data collected through session artifacts also confirmed participant interaction with intervention materials and engagement beyond basic participation but also provided evidence of the quality of interaction with intervention materials. Program materials provided evidence of participant interaction with all three variables of the research study as well as deeper examples of participant understanding and preparedness to apply new information to classroom settings. For example, direct quotations from participants provided both an acknowledgement of the importance of SEC and CRT on student success as well as reflections on the challenges of implementation “Mutual respect is tough but very important” and “It can be about letting go of control which can be difficult.” These examples indicated that participants both acknowledged the importance of the intervention goals but also reflected at a deeper levels about inherent challenges to implementation.

**Five Indicators of Fidelity of Implementation.** To measure fidelity of implementation, session observation and program materials data were analyzed through Dusenbury et al.’s (2003) five fidelity indicators (adherence to the intervention’s critical elements, application of proper dosage, quality of program delivery beyond basic elements, proper implementation of intervention treatment to student groups, and program differentiation between existing professional development). This analysis was captured in both Table 20 and the explanations below.

**Table 20***Five Fidelity Indicators*

<b>Indicator</b>	<b>Data Source</b>	<b>Fidelity Conclusion</b>
Adherence to the intervention's critical elements	Session implementation of objectives and participants' interactions with objectives.	Session objectives were presented and participants did interact with materials.
Application of proper dosage	Participant attendance	Program materials provided evidence of participant attendance.
Quality of program delivery beyond basic elements	Session materials indicated participant acknowledgement of importance as well reflection of classroom implementation.	Program materials provided evidence of delivery beyond basic implementation, as evidence by discourse and application conversations, and evidence of participant reflection on implementation for classroom needs.
Proper implementation of intervention treatment to student groups	Limited evidence at this time.	Student interviews did provide some evidence of transferability between teacher participants and students group but did not provide enough for conclusion. Issue is discussed in limitations and areas for future research.
Program differentiation between existing professional development	Evidence not provided through program materials.	While evidence did not exist in program materials, this fidelity indicator will be discussed in limitations of areas for future research.

Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18*, 237–256. doi:10.1093/her/18.2.237

**Adherence to Program.** Adherence to program indicates the intervention maintained the critical elements as designed (Dusenbury et al., 2003). In the case of professional development, the critical elements are expressed through session objectives and the implementation of these objectives through program activities and participant program materials. For the professional development observed session, the objective was both visually and verbally presented to participants as “Participants will be able to define democratic firmness, identify critical indicators of democratic firmness, and apply democratic firmness strategies through classroom scenarios.” To enact the objective,

participants worked with materials which included defining democratic firmness and a discussion of a classroom scenario where a specific student was supported through democratic firmness approaches. Because of session objective was communicated, materials were aligned with the stated objective, and participants engaged in materials and activities aligned with the objective, adherence to program was maintained for the observed session.

**Proper Dosage.** Proper dosage is defined as access to a program at the amount designed for the program (Dusenbury et al., 2003). In the case of professional development, proper dosage is attendance for sessions. For this study, attendance was gathered by collection of program materials from participants which indicated all participants attended every session and received the designed dosage.

**Quality of Program Delivery.** Quality of program delivery is defined as participant engagement with program materials at a level beyond just attendance such as reflection on effectiveness (Dusenbury et al., 2003). For this study, evidence of quality of program delivery included interactions with session materials beyond basic implementation such as passive listening and reflection on classroom application. Within the observed session, participants not only viewed a video regarding democratic firmness in the classroom but engaged in a discussion regarding the application within the classroom and how democratic firmness principles apply to classroom-based scenarios.

**Proper Implementation to Student Groups.** Because of limited evidence of the impact of the professional development materials on students, a complete analysis of the implementation to student groups was not made. However, student interviews did provide

some evidence of student recognition of program materials being implemented within the classroom.

**Program Differentiations.** Because only one example of program implementation existed for this study, program differentiation was not analyzed. This fidelity indicator is an area for future research and discussion if the professional development intervention is replicated within multiple settings.

**Adherence to Professional Development Research.** As was discussed in chapter 4, existing research on PD identifies clear characteristics of effective development including inquiry-based, content-specific, and aligned with immediate application in the classroom (Saderholm et al., 2016). Additionally, aspects such as appropriate frequency of sessions and limitations of PD were also discussed (Bryk et al., 2010; Guskey, 2000; Johnson & Fargo, 2010; Mundy et al., 2015; Sztajn, 2011).

For this study, specific care was taken to conform the PD intervention to existing research on effective PD. As Saderholm et al. (2016) identify, effective PD is inquiry-based, content specific, and aligned for immediate application. The design of this PD intervention included discourse-based activities such as application scenarios where participants took theoretical or strategic lessons and applied them to these real-world approximations of student social-emotional or cultural challenges. These scenarios were enacted through peer-to-peer or group discussion and not individual application reflection to create a level of shared inquiry and professional trust between participations (Bryk et al., 2010; Saderholm et al., 2016). As the PD intervention was provided to English content teachers, specific curriculum references of literature analysis, journaling, and peer editing were included as immediately applicable to the content classroom. As noted

in the areas for future research in this chapter, future applications of this PD intervention must note variations in content implementation and adapt materials and activities accordingly. Within journal entries and beginning discussions, participants were asked to apply specific strategies to classrooms between sessions for continued reflection on application within the classroom. This focus on immediate implementation in the classroom supported research-focus on alignment for immediate application and synthesized intervention and classroom when possible (Saderholm et al., 2016).

Within existing research, frequency of PD interventions varies in terms of length of sessions but a commonality of ten sessions existed as a common theme within the literature (Johnson & Fargo, 2010; Mundy et al., 2015). The PD intervention consisted of ten sessions over the course of five months totaling seven and a half hours of direct PD implementation. A variance from existing research was Johnson & Fargo's (2010) indications of the effectiveness of continuous, all-day (six hour) sessions as opposed to divided sessions as with this PD intervention. Systemic limitations prevented this implementation and, as will be discussed below, would have created new structures for the teacher participants which challenged organizational trust and willingness to engage in the intervention (Bryk et al., 2010).

A primary limitation of PD identified within existing research is rejection of the value of the PD and undermining of organizational trust in the value of the PD (Bryk et al., 2010). Drivers in this breaking of trust and value are implementation outside of existing structures which cause time and functional issues for teachers and lack of immediate implementation in the classroom (Bryk et al., 2010; Saderholm et al., 2016). The involvement of the pre-existing PLC structure was intentional to mitigate the impact

of time and functional issues on the implementation. Instead of creating a new system or method of delivery, the PD intervention used a pre-existing venue, which was contractually mandated for all teachers, for delivery. If the PD had been delivered through additional after-school, all-day, or in-service days, challenges to trust in the value of the PD may have existed prior to the beginning of the intervention and seen as an additional task or job function for participants and not an inquiry-based engagement in important topics. Additionally, carefully attention was paid to developing inquiry-based, teacher-drive, and reflective activities to foster a sense of engagement and ownership with PD materials and to provide for a level of input in how to best implement strategies within the classroom.

**Final Evaluation Question Analysis.** Measures of fidelity of implementation did indicate the professional development intervention was implemented as planned. Teacher participants engaged with program materials, objectives, and strategies as designed and beyond a basic level as evidenced by the discourse regarding authentic application as well as program materials. The positive affirmation of the evaluation question provided evidence that the professional development program was implemented as designed and inconclusive statistical answers to the research questions can be analyzed through limitations in data collection such as sample size and groups and not faults with implementation and reliability.

### **Limitations**

Limitations to these data and the research design existed and must be contextualized for replication or future research. These limitations included sample size, school and district limitations, and the absence of teacher and student control groups. All

three limitations were connected to barriers or delimitations within the district or school setting and should be taken into account by future researchers looking to replicate or add to results of this study. These limitations impacted the ability of the researcher to make causal claims on impact transfers from the teacher participant group and student groups which represented the primary area for future research.

### **Researcher, Sample Size, Selection Process, and Control Group**

The primary limitations within the research design were constricted due to limited implementation based on district policies and the restrictions of the researcher's position. These primary limitations included sample size, teacher selection process, and control group. These limitations severely limited the experimental modeling and statistical conclusions within the research design. Any replication or expansion of the professional development intervention must include provisions for overcoming these logistical challenges.

**Researcher as a Limitation.** The researcher in this study was a supervisor (administrator) at the school of implementation. The researcher was in a supervisory role with the teacher participants and specific delimitations were in place to separate his role as professional supervisor and researcher. Because this outside research could not be confused with evaluation of job performance, participants knew the PD intervention was the work of the researcher but the researcher did not deliver the PD, did not observe classrooms involved in the PD, and did not participate or observe any PD sessions. These actions were taken by individuals trained by the researcher. As such, a specific limitation of this study was the separation of the researcher from implementation and the reliance on third-party implementers. Additionally, as a leader of the school of implementation,



the researcher had a preexisting bias in increasing student performance due to his professional evaluation based in school data performance. While the researcher had no control or position in teacher participant selections of students, the researcher did know and worked closely with several of the students selected within the student participant group. The researcher did not directly interview students and the researcher never interacted with student participants within the context of the study. All consent forms were collected and interviews conducted by a neutral third party. As will be discussed in the implications section of this chapter, the level of trust and sharing of core values between this PD implementation, the participants, and the researcher was a positive aspect of this research and was critical to successful implementation.

**Researcher Position.** A limitation of these data was the small sample size for both the teacher participant and student participant groups and the process for selection. The sample size limitation was due to the researcher's position within the school district and the ability to institute an entire school programmatic change. Not being in a position of power to direct a whole school or whole district implementation, the researcher chose two highly impacted by student performance and diversity in demographics of students PLCs. These selections were approved by school and district leadership and recognized as a beginning impact study of a larger implementation. Likewise, limitations in access to student data and district approval process and policies regarding student data limited the number of student participants.

**Sample Size.** The small sample size was due to limited ability to implement the research at a whole school level as well as implementation within two specific course PLCs to maximize observation and implementation at the introductory level. The sample

size impacted all quantitative analyses or inferential conclusions without violated assumptions. The selection process also created noted impacts to generalizability of these data as well as bias in pre-knowledge of materials. A major area of limitation and needed within any replication or future research is a divided treatment and control group for statistical comparison.

Quantitative data within this research design were analyzed with inferential caution due to the sample size. As discussed in chapter four of this study, a hypothetical  $ES = .65$  with  $\alpha = .05$  indicated a minimum needed sample size of 33 ( $df = 32$ ) to conduct an inferential hypothesis test with statistical power. With twelve teacher participants, this sample size did not meet this requirement for statistical power and therefore all inferential hypothesis presented in this study must be taken with caution.

The sample size impacted the ability to draw any statistically significant inferential conclusions from the MANCOVA test and was part of the failure to reject the null hypothesis. Although Finch (2005) established the non-parametric MANOVA test to account for violated assumptions such as small sample size, his examples included variables and covariates with varying sample sizes but with some sample sizes within need sample sizes for proper effect sizes using a Cohen's  $d$  ( $N = 5, 10, 50$ ;  $ES = 0, 0.2, 0.8$ ). Within one variable group composed on a uniform twelve participants, the non-parametric MANCOVA lacked the needed effect size to demonstrate statistical significance based on a standard  $X^2$  requirement.

**Sample Selection.** A limitation of the research design was the sample selection process with special attention to potential sampling biases of specific persons and settings as well as restricted heterogeneity of populations, settings, and times. As Shadish et al.

(2002) note, the non-randomness and homogeneity of sample selections may result in both sampling biases as well as analytical generalizations. Additionally, restricted heterogeneity of populations, settings, and times can result in an over standardization of participant characteristics and measures (Shadish et al., 2002).

The sample selection for the research design was homogenous in terms of subject matter taught (English) as well as venue of intervention (PLC) and dosage (twice monthly for ten sessions). This selection of English and special education teachers was intentional and planned by the researcher in the design of the study for two reasons: logistical probability of participation by the selected group due to existing structures and reliability of facilitators to implement the intervention materials with fidelity. This homogenous selection did create possible sampling biases and analytical generalizations because of the personality, experiences, and existing knowledge of the selected participants. Additionally, the restricted heterogeneity of populations resulted in a standardization of population backgrounds (English or special education teachers, prior experience with other members of the participant group, and existing reliability and trust of the program facilitators which may mitigate analysis of change due to program implementation).

To counter these issues of bias within sample selection, any replication or future continuations of research require a larger, more heterogeneous sample size comprising of multiple subject fields and of participants without previous knowledge of both participants and facilitators. These additions to any replication or future research would result in less generalization in statistical outcomes as well as increase the research design

to show possible causality between the professional development treatment and student academic achievement.

**Addition of Control Group.** Due to the limited scope of the intervention, only a treatment group was established in the research design. This absence of a control group limited the types of statistical testing available to the researcher as well as limited a comparison of untreated participants' responses to qualitative data. Any future continuation of this research requires a control group especially if any research in casual inferences between teacher participation and a parametric student group's academic achievement.

### **Validity and Reliability of Measures or Conclusions**

The scope and size of the professional development intervention presented several limitations or cautions in regards to validity and reliability of measures or conclusions. Because no attempts were made to prove causality between an internal or external variable and the intervention outcomes, any replication of this study would need further development of a treatment group, experimental group, and additional external measures such as student performance results to demonstrate any causal relationship between the intervention variable and student academic improvement. Because no claims of causality were made in this research design, measures of internal or external validity of statistical conclusions were not required (Shadish et al., 2002). However, three issues concerning limitations in reliability were impactful to any conclusions of this study: (1) reliability of measures, (2) reliability of instruments and observers, and (3) mono-operation bias.

**Reliability of Measures.** The research design included measures for three constructs: (1) teachers' perceptions of positive student-teacher relationships, (2)

teachers' perceptions of student efficacy, and (3) teachers' perceptions of student emotional resilience. As Shadish, et al. (2002) note, when relationships involve three or more variables, unreliability of measures is more difficult to predict as compared to bivariate relationships. Any research conclusions regarding these three measures must include caution due to the complexities of proving statistical covariance between three related, but distinct variables, as well as compounding challenges of sample size and limited effect size or statistical power.

The researcher made a decision to measure these three constructs due to the introductory nature of this intervention and the conclusions of the needs assessment discussed in chapter two of this study indicating limited advanced knowledge of these topics. As Rossi, et al. (2004) note, pilot or introductory studies are often more focused on implementation and addressing of programmatic needs than immediate or long range outcomes. As such, any continuation of this research study requires focus on bivariate relationships between a program and one construct measure or multiple participant treatment groups measured for a single construct each.

**Reliability of Instruments and Observers.** While the internal consistency and reliability measures of the survey data confirmed an acceptable coefficient of above .70, the coefficient was not within the high or excellent range (Salkind, 2008). As Shadish, et al. (2002) note, a change in a measurement instrument can mimic a treatment effect. In terms of qualitative measurements, increases in knowledge of observers may alter conclusions between pre-intervention and post-intervention observation (Shadish et al., 2002). Both of these reliability issues may result in limitations to conclusions of a

research study, with special attention to the limited scope of the research design and sample size limitations.

The quantitative measure for the research design was a participant survey collected at pre-test and post-test intervals. The survey was amalgamated from three existing surveys: Pianta's (1999) STRS, Pintrich, et al.'s (1991) MSLQ, and Bernard, et al.'s (2012) SEW surveys. As discussed in chapter four of this study, these three surveys were chosen because of existing research showing functionality and reliability as well as connections to each of the three variables of the research design. However, questions from these existing surveys were operationalized and organized around variables in the statistical analysis, therefore, altering the original linear progression of the surveys. As such, these changes constituted limitations in statistical conclusions based on Shadish, et al.'s (2002) concerns over alterations and changed to instrumentation.

As was discussed previously in this chapter, measurements of three or more variables provided challenges to predicting the reliability of outcomes. Continuations of this research could use one of the existing surveys to measure one of the variables and the intervention's impact on that limited variable within a bivariate relationship. This limiting of survey and variable measures would address limitations of both the multiple variable measures and altering of existing surveys impact on outcomes.

**Mono-Operation Bias.** A limitation of this research design was the use of a mono-operationalization of measurement of constructs within the quantitative design. As Shadish, et al. (2002) indicate, single operations may result in underrepresent constructs and challenge the validity of expressed outcomes. The mono-operationalization within the quantitative research design was the use of one survey for statistical conclusions. The

researcher used just one measure due to the resource and scope limitations of the intervention. For continuation of this research design, multiple quantitative measures should be operationalized. As was discussed previously in this chapter, the addition of a control group as well as student groups would provide additional measures as well as begin to develop measures to test for causal relationships between the professional development intervention and student achievement outcomes.

### **System Implementation**

In order to achieve district approval to meet the timeline for professional development implementation for the school year, limitations on student data, especially quantitative survey data, were followed by the researcher. To demonstrate any transferability or causality between the implementation of the teacher professional development and student perceptions, corresponding student survey data were required but not obtained. Furthermore, these limitations removed partnered teacher and student treatment and control groups from the research design. For replication, statistical models exist to analyze transferability and causality between teacher impact and student impact and will be discussed in the areas for future research section.

In addition to implementation limitations, district existing professional development was a mitigating variable to results, most notably *M* and *SD* variations between the pre-test and post-test surveys for the positive teacher-student relationships variable. When the research design was developed, district frameworks did indicate a need for SEC and CRT development and support for staff but existing infrastructures did not exist. While explicit SEC professional development is still not a part of the district professional development system plan, increased emphasis on cultural proficiency,

including relationships, was implemented at the district and school level. While receiving the intervention treatment, the teacher participants were also receiving formalized district training on cultural proficiency with a strong focus on positive relationships. This mitigating variable may explain the smaller *M* and *SD* variation between pre-test and post-test in the relationship variable due to increased and recent secondary training for the teacher participant groups aligned with the pre-test.

As will be discussed in the areas for future research section of this chapter, gathering of student data of the impact of implementation may have provided strong evidence of a causal relationship between the professional development and a larger systemic or organizational impact. Analysis of the professional development intervention's impact on student academic data, and causal transference from teacher professional development to improved student academic performance, could be a strong conclusive statement of the professional development's impact. If this research design were to be replicated, a strong suggestion would be an analysis of student data to match with teacher data to analyze and hypothesize about system impact on the sociocultural and noncognitive factors of the academic achievement or opportunity gap.

### **Areas for Future Research**

The research design for this study was best described as an introductory study on the development of teacher PD to begin to address larger noncognitive and sociocultural aspects of the academic achievement or opportunity gap. Limitations in sample/participant size, the scope and size of the implementation, and statistical measures of causality are requirements for replication or modification for future research. Further theoretical or research questions around the role of community engagement, teacher and



staff efficacy, curriculum cultural responsiveness, and curriculum social-emotional competencies would expand this research design beyond teacher professional development treatment and into areas of systemic and long range intervention planning.

### **Future Implementation Recommendations**

The following recommendations for replication or future study of this research design focus on adaptations, additions, or advisements towards implementation of the treatment. While offering some variation in the theoretical approach, these suggestions are intended to increase implementation and statistical evaluation scope of the research design.

**Increased Implementation and Alignment.** The exploratory nature of this study limited implementation at the whole school or whole district level. A measurement of effective professional development is organizational or systemic support and change (Guskey, 2000). The limited professional development intervention only gathered impact on two teacher PLCs and did not encompass whole school or systemic organizational change. For replication, implementation of the SEC and CRT professional development at the whole school, cluster, or district level would not only provide additional evaluation data to support causal inferences between the treatment and impact (Shadish et al., 2002), but would also support the implementation by having a larger organizational backing to the validity of the treatment.

**Variability in Research Design.** While developed along Leviton and Lipsey's (2007) theory of treatment, the study's impact was on a minimal teacher treatment group. Furthermore, the PLCs selected for the treatment were part of the English and special education departments and provided for additional content implementation of SEC and

CRT materials (Guskey, 2000). Had the chosen PLCs been mathematics or science teams, where curricular and content materials are not as easily adaptable to SEC and CRT theoretical frameworks, results may have differed greatly from the results presented in this study. Any future research design must take into account not only deliverability to a larger teacher group, but also variability in the teacher content areas and how treatment implementation would be altered by curricular or content differences.

**Increased Statistical Measurement and Causality Analysis.** A primary area for future study, based on the limitations identified within the study, is increased statistical measurement and efforts to demonstrate causality between increases in teacher and student treatment groups. In terms of demonstrating additional inferential statistical power, increasing sample sizes beyond 33 ( $df = 32$ ) to result in an  $ES = .65$  with  $\alpha = .05$  would ensure greater statistical validity in replication or future study.

The addition of a control group to compliment statistical measures of the treatment group would greatly increase statistical validity and pathways to causality analysis. The addition of multiple levels of treatment and control groups would also increase the design for causality measurement as it would eliminate mono-operational bias and increased construct strength in measurements (Shadish et al., 2002). In addition to a treatment and control teacher participant group, corresponding student control and teacher groups could provide additional matched pairs for pre-test and post-test analysis and add additional quantitative measures (student performance data in pre-test and post-test format) in addition to teacher perception surveys. These two measures would provide for multiple operationalization of the research design as well as provide constructs for the

measurement of transferability between teacher knowledge and student achievement impacts.

A primary goal of any future research must be to identify operational transferability from the teacher treatment group to a student treatment group. Analyzing the relationship between these two treatment groups for the three variables would provide further evidence of a causal relationship between the treatment and positive student impacts (Shadish et al., 2002; Teddlie and Taskakkori, 2003).

In the research design, the only impacts on a student group were analyzed through qualitative data measures of student interviews with a limited student group which challenged the research validity of any conclusions regarding causality between the treatment and student impact. Increased measures of causality between teacher and student treatment groups would also decrease the probability of Type I statistical errors due to confirmation bias of selected teachers and students within the treatment groups. Providing for a control group, as well as the multiple treatment and control groups as discussed above, would provide alternate designs to reduce the probability of Type I statistical errors, confirmation bias, and increase the probability of parametric relationships between groups (Shadish et al., 2002). Overall, increasing quantitative statistical validity within the research design would provide greater evidence towards program effectiveness and move the treatment closer to the high impact of altering the noncognitive or sociocultural impact on the academic achievement or opportunity gap.

**Community Engagement.** Apart from increased research design recommendations, additional theoretical areas should be considered in replication or application for future research. Due to the introductory nature of the research design,

delimitations regarding variables beyond teacher and student impact were not analyzed. Given the theoretical framework of the holistic nature of the noncognitive and sociocultural impacts on the academic achievement or opportunity gap, mitigating variables and increased areas for impact should not be ignored (Boykin & Noguera, 2009; Farrington et al., 2012; Jensen, 2009). While not limited to these additional variables, the following three variables are larger systemic or social variables not explored within the study: community engagement, curriculum cultural responsiveness, and curriculum SEC.

While the theory of treatment focused solely on teacher PD, a theoretical extension of SEC and CRT interventions to address the noncognitive or sociocultural aspects of the academic achievement or opportunity gap would be increased community engagement from outside stakeholders such as parents or community groups. Models for addressing noncognitive or sociocultural student needs often expand beyond classroom and school emphasis and into a parent, community, and political sphere (Boykin & Noguera, 2009; Farrington et al., 2012; Gay, 2010; Hammond, 2014). While moving away from the professional development treatment model, community engagement measures serve as a benefit to the black box theory of treatment by impacting difficult and dynamic mitigating variables outside of the school or district which cannot be addressed by any professional development intervention.

**Impacts on Teacher Preparation Programs.** While this research focused on implementing a PD intervention to practicing teacher participants, an important area of future research implied by this study is an increase in SEC and CRT indicators in teacher preparation programs through colleges and universities. As with this study, these concepts should be interwoven into existing structures such as classroom management

courses or cultural proficiency and teaching courses. While it is imperative that individual schools or school districts address the SEC and CRT abilities of veteran or practicing teachers, additional focus must be given to teacher preparation programs to engage future teachers with these skills so that introductory level PD is not required at the individual school level. District administrators should explore the value in interweaving this study into teacher preparation programs and demand increases in these concepts as part of partnerships with local or state institutions with memorandums of understanding with districts.

### **Implications for Practice**

Based on the professional development intervention and research design outcomes of this study, several implications for future practice were identified. These areas included new results or implications to the field, the relationship between facilitator and PD content, expansion of SEC and CRT professional development, increasing of SEC and CRT designed curriculums, and redesigns of accountability and monitoring data to include SEC indicators. These implications to practice could be implemented through modifications to existing structures and some aspects of these areas have already been implemented by the Mid-Atlantic school district during the course of this study.

### **New Results or Implications to the Field**

Based on this study and results, several new implications to the existing field of SEC or CRT theoretical frameworks or research were made. A theoretical goal of this study was a synthesis of existing theoretical and practical implications of SEC and CRT research threads and an implicational goal of this study was shifting SEC-based interventions from an elementary to a secondary level.

**Synthesis of Research Threads.** As was discussed in the literature review of this study, clearly delimited research threads for SEC and CRT exist with some synthesis. A theoretical conceit of this study was that noncognitive and sociocultural impacts are a primary driver within the academic achievement and opportunity gaps and require intervention beyond pedagogy and instruction (Boykin & Noguera, 2009; Farrington et al., 2012; Jensen, 2009). A prominent existing intervention for non-classroom structures is increasing teacher SEC and embedded social-emotional indicators within classroom instruction opportunities (Civic Enterprises et al., 2013; Jennings & Greenberg, 2008; Zins et al., 2007). While some threads of CRT research do include the neuroeducation and learning implications of SEC, a full synthesis of these two concepts as an immediate applicable intervention is not prevalent in existing research (Hammond, 2014). A goal of this study was to fully synthesize the interplay between SEC concepts and CRT concepts to one exploratory intervention.

**Shifting Intervention by School Levels.** While a large body of existing research and interventions for SEC or SEL strategies exist, a primary focus of the major studies in SEC or SEL professional development focus on the development of SEC within elementary aged school children (Greenberg & Kusche, 1993; Jennings et al., 2014; Jennings & Greenberg, 2008; Kam et al., 2004; Zins et al., 2007). These prominent existing interventions focus on the development of emotional intelligence and emotional processing within elementary school aged children and less on SEC as a mediator of the impacts of noncognitive or sociocultural factors within the academic achievement or opportunity gaps.

While the development of emotional intelligence or emotional processing in younger children is important, a major implication of this study was that these concepts must be applied, and varied, for older, secondary students who may not have received the indicated interventions in elementary school. Additionally, the noncognitive or sociocultural impacts on achievement are greater as students mature to the secondary level and increase involvement in negative behaviors (Farrington et al., 2012; Jensen, 2009; Valois & Zullig, 2012). This exploratory PD intervention was an initial response to this deficient of SEC interventions within secondary levels and a refocusing on SEC interventions away from building progenitive emotional intelligence in younger children and a shift towards using SEC and CRT as direct interventions for older students engaging in higher level behaviors or lowered academic performance.

### **Relationship between Facilitator and Professional Development Content**

As was discussed in the descriptions of effective PD, the development of organizational trust among participants, materials, and facilitators is a critical element to effective PD (Bryk et al., 2010). Given the more theoretical and exploratory nature of this study, this level of trust was critical to success and shifting of teacher participants' perceptions of relationships, efficacy, and resilience. Unlike a specific content or curriculum PD, the SEC and CRT PD was based in holistic approaches to student behaviors and efficacy and strategies were more variable based on classroom and school climate as well as individual student stressors. Because immediate application within the classroom is another critical aspect of effective PD, an imperative within this study was a building of trust between participants and their relationship with the materials (Saderholm et al., 2016).

While discussed as a limitation of the research previously in this chapter, participant knowledge of the PD facilitator was also a positive implication of this study. Because these theoretical and difficult topics of SEC and CRT extend beyond clear content strategies and have not been fully explored in existing PD, organizational and personal trust between participants and the facilitator or materials to engage in the intervention was a critical variable for success (Bryk et al., 2010). Precisely, the shared trust of the facilitator's core values and sense of ethics or justice around these topics must be either known or deliberately established within the context of the PD intervention as to negate mistrust or cynicism regarding the very ontological need for the intervention. As was evidenced in this study, participants willingly engaged in program materials and very reflective in these materials due to the crafted trust between the participants and the program materials as communicated through the facilitators and by knowledge of the PD creator.

### **Expansion of SEC and CRT Professional Development**

As was discussed in the limitations of this research study, the research design and data were gathered within limitations of district research protocols. These limitations included limited access to student survey data, limited size of implementation, and balancing with larger system goals. While these system limitations did not prevent an exploratory study, they created notable delimitations for the size, scope, and implementation of the study. A major implication to practice of this study was an expansion of the SEC and CRT professional development to more teacher participant groups, district-wide personnel, and all school staff including employees outside of the classroom.



An expansion of the SEC and CRT professional development would allow for modification by content areas or job descriptions. While this research design was implemented to English content PLCs, an expansion would require modification for not only other content areas but other job descriptions such as administrators, building security, and support services. This unified message of the importance of SEC and CRT professional development would strength both classroom implementation and strengthen claims of causal relationships between the strategies and student academic improvements.

Within the Mid-Atlantic district of this study, several areas related to SEC and CRT professional development were implemented during the course of this study. One area was mandatory cultural proficiency training for all staff including non-teaching staff. This training focused on cultural identity, communication variance, and cultural identity maps which shared similarities to the CRT aspects of this research design. Additionally, an expansion of cultural proficiency training has already been proposed for subsequent school years.

### **Increasing of SEC and CRT Designed Curriculum**

As mentioned previously in this chapter, more centralized engagement in SEC and CRT provides authenticity to the professional development intervention. Professional development which exist in a vacuum often faces challenges of participant apathy and lack of transferability to a classroom setting (Desimone, 2009; Guskey, 2000; Saderholm et al., 2016; Sztajn, 2011). As Desimone (2009) indicates, increased operationalization of professional development directly into the classroom through curricular supports provides both authentic application for teachers and increases opportunities for effective evaluation and measurement of professional development effectiveness.

Curriculum opportunities for explicit SEC and CRT are both critical but also minimally available with standards based curriculum (Banks, 2015; Boykin & Noguera, 2009; Gay, 2010; Hammond, 2014). Unifying SEC and CRT professional development with increased and centralized emphasis within curriculum materials would increase participant transferability to the classroom. From a CRT perspective, increasing culturally proficient texts, strategies, and pedagogy are not a suggestion but an important first step to the creation of a CRT based classroom (Banks, 2015; Gay, 2010; Hammond, 2014). A specific challenge within an area for future research not covered by this study would be the expansion of both professional development and curriculum emphasis away from humanities content areas and to STEM based teacher professional development and curriculum.

### **Accountability and Data Monitoring to Include SEC Indicators**

As was discussed in the theoretical and contextual frameworks of this study, accountability systems based on singular testing measures have not demonstrated adequate impacts on the academic achievement or opportunity gaps (Braun et al., 2010; Lee & Reeves, 2012). These frameworks not only informed the development of new methods of professional development based in SEC and CRT research but also raise questions regarding the expansion of accountability and data monitoring to include SEC indicators such as social-emotional interventions, inclusion of poverty or community variable indicators, and the inclusion of qualitative student data within the building of whole student data profiles.

Within the Mid-Atlantic district of this study, several redesigns to school accountability measures have already included an expansion of non-traditional

accountability measures beyond testing. The system-wide data monitoring tool has expanded to be multivariable and includes external standardized testing measures, classroom performance indicators (academic grades), and successful transitions between key grades (elementary transition to middle school to high school). Additionally, data monitoring tools for the district are being guided by Knafllic's (2015) theory of data stories which use multivariable data streams to create a biographic portrait of an individual instead of using data to solely track progress. Additionally, a fourth data stream of direct social-emotional and non-academic indicators is currently being developed by the district's office of community engagement and student services to capture the very indicators discussed within this study.

### **Conclusion**

Building upon a theoretical framework which proposed the academic achievement or opportunity gaps as noncognitive or sociocultural phenomena, this study explored the effects of a professional development treatment on teachers' perceptions of positive teacher-student relationships, student efficacy, and student emotional resiliency. Through a mixed methods evaluation design, quantitative and qualitative evidence were analyzed to indicate if perceptions of these three constructs increased within the teacher participant group. While parallel qualitative evidence did demonstrate engagement, reflection, and changes in perception for the teacher participant group, a lack of statistical significance within quantitative data limited any conclusive analysis of the professional development program's full impact on teacher perceptions of the three constructions. As was discussed in the literature reviews in this study, solely relying on curricular and accountability interventions has not demonstrated sustained closing of the academic achievement or

opportunity gaps and these gaps require exploration into the noncognitive and sociocultural impacts on students. While this study did not conclude statistical significance due to the professional development intervention, the contextual and theoretical frameworks of the achievement or opportunity gap and the impact of noncognitive or sociocultural indicators on this gap still remain valid areas for exploration in future research through non-traditional professional development.

As an introductory study, the SEC and CRT interventions were implemented on a small scale with noted limitations in sample size, lack of control group, and lack of statistical power. It is highly recommended that a future implementation of this study include a larger, whole school or district, implementation and provide for variability within content and teacher team needs (Guskey, 2000). Because measures of fidelity of implementation and reliability indicated the professional development intervention was implemented and participants engaged at an authentic and application based level, this study could serve as a base model for a larger study which would include studies of transferability to whole schools, systems, or to causal relationships between the teacher professional development and student academic data.

The high impact goal of this study was to transfer teacher interaction with SEC and CRT professional development materials to a causal relationship with student improvement in the three constructs and a final goal of improved student academic achievement. If future studies can demonstrate this causal relationship, this introductory study would serve as a first, low impact step to alternative methods of providing intervention for the noncognitive or sociocultural challenges facing students and the pervasive and ever present academic achievement and opportunity gaps.

## REFERENCES

- Allensworth, E. & Easton, J.Q. (2007). What matters for staying on-track and graduating in Chicago Public Schools? Chicago: University of Chicago Consortium on Chicago Schools Research.
- Altschuld, J. W. & Witkin, B. R. (2000). *From needs assessment to action: Transforming needs into solution strategies*. New York, NY: Sage.
- Ames, C. & Archer, J. (1988). *Achievement goals in the classroom: Students' learning strategies and motivation processes*. *Journal of Educational Psychology*, 80(3), 260-267.
- Aydin, S. (2016). An analysis of the relationship between high school students' self-efficacy, metacognitive strategy use and their academic motivation for Learn Biology. *Journal of Education and Training Studies*, 4(2), 53-59.  
doi:10.11114/jets.v4i2.1113
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavior change. *Psychological Review*, 84, 191–215. doi:10.1037/0033-295X.84.2.191
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-Efficacy in Changing Societies* (pp. 1-45). New York: Cambridge University Pres.
- Bandura, A. (1997). *Self efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Banks, J. A. (2015). *Cultural diversity and education: Foundations, curriculum, and teaching*. (6th ed.). Boston, MA: Pearson.

- Barajas, H.L. & Ronnkvist, A. (2007). Racialized space: Framing Latino and Latina experience in public schools. *Teachers College Record*, 109, 1517-1538.
- Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-I): A test of emotional Intelligence*. Toronto: Multihealth Systems.
- Bernard, M. E., Mangum, N., & Urbach, D. (2012). *Social-emotional wellbeing survey report*. Australian Council for Educational Research. Retrieved from [https://www.acer.edu.au/files/SEW\\_Sample\\_Report\\_Secondary\\_Jul\\_2012.pdf](https://www.acer.edu.au/files/SEW_Sample_Report_Secondary_Jul_2012.pdf)
- Birch, S. H., & Ladd, G. W. (1998). Children's interpersonal behaviors and the teacher-child relationship. *Developmental Psychology*, 34, 934-946.
- Boas, F. (1940). *Race, language, and culture*. New York: Free Press.
- Boorn, C., Dunn, P. H., & Page, C. (2010). Growing a nurturing classroom. *Emotional & Behavioural Difficulties*, 15(4), 311-321. doi:10.1080/13632752.2010.523223
- Bondy, E., Ross, D.R., Hambacher, E., & Acosta, M. (2012). Becoming warm demanders: Perspectives and practices of first year teachers. *Urban Education*, 48(3), 420-450. doi:10.1177/0042085912456846
- Bourdieu, P. (1977). *Outline of a theory of practice* (R. Nice, Trans.). Cambridge: Cambridge University Press.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste* (R. Nice, Trans.). Cambridge: Cambridge University Press.
- Boykin, W., & Noguera, P. (2011). *Creating the opportunity to learn: Moving from research to practice to close the achievement gap*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Bradshaw, C., Reinke, W., Brown, L., Bevans, K., & Leaf, P. (2008). *Implementation of school-wide positive behavioral interventions and supports (PBIS) in elementary schools: Observations from randomized trial. Education and Treatment of Children, 31*, 1-26.
- Braun, H., Chapman, L., & Vezzu, S. (2010). The black-white achievement gap revisited. *Education Policy Analysis Archives, 18*(21), 1-99
- Brenner, E. M., & Salovey, P. (1997). Emotional regulation during childhood: Developmental, interpersonal, and individual considerations. In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 168-195). New York: Harper Collins.
- Brombin, C., Salmaso, L., Fontanella, L., & Ippoliti, L. (2015). Nonparametric combination-based tests in dynamic shape analysis. *Journal of Nonparametric Statistics, 27*(4), 460-484. Doi: 10.1080/10485252.1071811.
- Buck, R. (1976). A test of nonverbal receiving ability: Preliminary studies. *Human Communication Research, 2*, 162-171.
- Bryk A. S., Gomez L. M., & Grunow, A. (2010). *Getting ideas into action: Building networked improvement communities in education*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching. Retrieved from [http://cdn.carnegiefoundation.org/wp-content/uploads/2014/09/bryk-gomez\\_building-nics-education.pdf](http://cdn.carnegiefoundation.org/wp-content/uploads/2014/09/bryk-gomez_building-nics-education.pdf)
- Bryk, A. S. & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. New York, NY: Russell Sage Foundation.

- Bryk, A. S., Bender Sebring, P., Allensworth, E., Luppescu, S., & Easton, J. Q. (2010). *Organizing schools for improvement: Lessons from Chicago*. Chicago, IL: The University of Chicago Press.
- Byrne, B. M. (1994). Burnout: Testing for the validity, replication, and invariance of causal structure across elementary, intermediate, and secondary teachers. *American Educational Research Journal*, 31, 645-673.
- Byrnes, J. (2003). Factors predictive of mathematic achievement in white, black, and Hispanic 12<sup>th</sup> graders. *Journal of Educational Psychology*, 95(2), 316-326.
- Carey, R. L. (2014). A cultural analysis of the achievement gap discourse: Challenging the language and labels used in the work of school reform. *Urban Education*, 49(4), 440-468.
- Carrion, V. G. & Wong, S. S. (2012). Can traumatic stress alter the brain? Understanding the implications of early trauma on brain development and learning. *Adolescent Health* 51(2), 23-28. doi: 10.1016/j.jadohealth.2012.04.010
- Case, K. A. & Hemmings, A. (2005). Distancing strategies: White women preservice teachers and antiracist curriculum. *Urban Education*, 40(6), 606-626.
- Chambers, T. V., Huggins, K. S., & Scheurich, J. J. (2009). To track or not to track: Curricular differentiation and African American students at Highview High School, *Journal of Cases in Educational Leadership*. 12(1). 38-50.
- Chambers, T. V. & McCready, L. T. (2011). “Making space” for ourselves: African American students’ responses to their marginalization, *Urban Education*. 46(4). 152-178.



- Chambers, T. V. & Tahron, L. A. (2013). Academic success for students of color...at what cost? The important of school context at Birch High Schools. *Journal of Cases in Educational Leadership*, 16(4). 31-44.
- Chan, D. W. (2006). Emotional intelligence and components of burnout among secondary school teachers in Hong Kong. *Teaching and Teacher Education*, 22, 1042-1054.
- Chauhan, P., & Dickson, R. N. (2009). The impact of neighborhood disadvantage and exposure to violence on self-report of antisocial behavior among girls in the juvenile justice system. *Journal of Youth and Adolescence*, 38, 401 – 416. doi 10.1007/s10964-008-9326-3
- Cherniss, C., Extein, M., Goleman, D., & Weissberg, R. P. (2006). Emotional intelligence: What does the research really indicate? *Educational Psychologist*, 41(4), 239-245.
- Christenson, S.L. & Havsy, L.H. (2004). Family-school-peer relationships: Significance for social, emotional, and academic learning. In Zins, J.E., Weissberg, R.P., Wang, M.C., & Walberg, H.J., (Eds.) *Building academic success on social and emotional learning: What does the research say?* (pp. 59-75). New York: Teachers College Press.
- Civic Enterprises, Bridgeland, J., Bruce, M., & Hariharan, A. (2013). *The missing piece: A national teacher survey on how social and emotional learning can empower children and transform schools*. Collaborative for Academic, Social, and Emotional Learning. Chicago: Author.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Collins, K. M. T., Onwuegbuzie, A. J., & Sutton, I. L. (2006). A model incorporating the rationale and purpose for conducting mixed methods research in special education and beyond. *Learning Disabilities: A Contemporary Journal*, 4, 67-100.
- Creswell, J. W. & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research (2nd ed.)*. Thousand Oaks, CA: Sage,
- Davis, A., Solberg, V. S., de Baca, C., & Hargrove Gore, T. (2014). Use of social emotional learning skills to predict future academic success and progress towards graduation. *Journal of Education for Students Placed at Risk*, 19, 169-182  
doi:10.1080/10824669.2014.972506
- Denham, S., Bassett, H.H., Zinsser, K., & Wyatt, T. M. (2014). How preschoolers' social-emotional learning predicts their early school success: Developing theory-promoting, competency-based assessments. *Infant and Child Development*, 23, 426-454. doi:10.1002/icd.1840
- DuFour, R. DuFour, R., Eaker, R., & Many, T. (2010). *Learning by doing: A handbook for professional learning communities at work (2nd ed.)*. Bloomington, IN: Solution Tree Press.
- Durlak, J. A., Weissberg, R.P., Dymnicki, A. B., Taylor, R.D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432.

- Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18*, 237–256. doi:10.1093/her/18.2.237
- Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. Newbury Park, CA: Sage Publications.
- Elder, G. H. (1974). *Children of the Great Depression: Social change in life experience*. Chicago, IL: The University of Chicago Press.
- Elder, G. H. (1995). Life trajectories in changing societies. In A. Bandura (Ed.), *Self-Efficacy in Changing Societies* (pp. 46-68). New York, NY: Cambridge University Press.
- Elder, G. H., Caspi, A., & Van Nguyen, T. (1986). Resourceful and vulnerable children: Family influence in hard times. In R. K. Silbereisen, K. Eyferth, & G. Rudinger (Eds.), *Development as action in context*, (pp. 167-186). Berlin: Springer-Verlag.
- Elias, M. J., Tobias, S.E., & Friedlander, B.S. (1999). *Emotionally intelligent parenting*. New York: Harmony Books.
- Elksnin, L. K. & Elksnin, N. (2003). Fostering social-emotional learning in classrooms. *Education, 124*, 48-63.
- Engelbart, D. C. (1992). Toward high-performance organizations: A strategic role for Groupware. Groupware '92. San Jose, CA: Morgan Kaufman Publishers.
- Evans, G. W. & Fuller-Rowell, T. E. (2013). Childhood poverty, chronic stress, and young adult working memory: The protective role of self-regulatory capacity. *Developmental Science, 16*(5), 688-696.

- Farnham, L., Fernando, G., Periogo, M., Brossman, C., & Tough, P. (2015). Rethinking how students succeed. *Stanford Social Innovation Review*. Retrieved from [http://www.ssireview.org/up\\_for\\_debate/article/rethinking\\_how\\_students\\_succeed](http://www.ssireview.org/up_for_debate/article/rethinking_how_students_succeed)
- Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners. The role of noncognitive factors in shaping school performance: A critical literature review*. Chicago, IL: University of Chicago Consortium on Chicago School Research. Retrieved from <https://ccsr.uchicago.edu/publications/teaching-adolescents-become-learners-role-noncognitive-factors-shaping-school>
- Fast, L.A., Lewis, J.L., Bryant, M.J., Bocian, K.A., Cardullo, R.A., Rettig, M., & Hammond, K.A. (2010). Does math self-efficacy mediate the effect of the perceived classroom environment on standardized math test performance? *Journal of Educational Psychology*, 102(3), 729-740.
- Frenzel, A.C. (2014). Teacher emotions. In E.A. Linnenbrink-Garcia & R. Pekrun (Eds.), *International Handbook of Emotions in Education* (pp. 494-519). New York, NY: Routledge.
- Ferry, B., Roozendaal, B., & McGaugh, J.L. (1999). Role of norepinephrine in mediating stress hormone regulation of long-term memory storage: A critical involvement of the amygdala. *Biological Psychiatry*, 46(9), 1140-1152.
- Finch, H. (2005). Comparison of the performance of nonparametric and parametric MANOVA test statistics when assumptions are violated. *Methodology* 2005; Vol. 1(1):27–38. doi 10.1027/1614-1881.1.1.27

- Foucault, M. (1975). *Discipline and punish: The birth of the prison* (A. Sheridan, Trans.). New York, NY: Vintage Books.
- Freudenthaler, H. H., & Neubauer, A. C. (2005). Emotional intelligence: The convergent And discriminant validities of intra- and interpersonal emotional abilities. *Personality and Individual Differences*, 39, 569–579.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.
- Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press.
- Gaylord-Harden, N. K., Cunningham, J. A., & Zelencik, B. (2011). Effects of exposure to community violence on internalizing symptoms: Does desensitization to violence occur in African American youth? *Journal of Abnormal Child Psychology*, 39(5), 711-719.
- Gazzaniga, M. S., Ivry, R. B., & Mangun, G. R. (2009). *Cognitive neuroscience: The biology of the mind*. New York, NY: Dana Press.
- Gibson, J. J. (1966). *The senses considered as perceptual systems*. Ithaca: Cornell University Press.
- Gibson, J. J. (1979). *The ecological approach to visual perception*. New York: Psychology Press.
- Ginsberg, H. & Oppen, S. (1969). *Piaget's theory of intellectual development: An introduction*. Englewood Cliffs, NJ: Prentice Hall.

- Glaeser-Zikuda, M., Stuchlikova, I., & Janik, T. (2013). Emotional aspects of learning and teaching: Reviewing the field-discussing the issues. *Orbis Scholae*, 7(2), 7-22.
- Goddard, R.D., Hoy, W. K., Woolfolk Hoy, A. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. *Educational Researcher*, 33, 3-13.
- Goffman, E. (1963). *Stigma: Notes on the management of identity*. New York, NY: Simon & Schuster.
- Goleman, D. (1995). *Emotional intelligence*. New York, NY: Bantam Books.
- Goleman, D., Barlow, Z., & Bennett, L. (2010). Forging new norms in New Orleans: From emotional to ecological intelligence. *Teacher Education Quarterly*, 37(4), 87-98.
- Good, C., Aronson, J., Inzlicht, M. (2003). Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat. *Applied Developmental Psychology*, 23, 645-662. doi: doi:10.1016/j.appdev.2003.09.002
- Goulding, C. (2005). Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research. *European Journal of Marketing*, 39(3/4), 294-308. doi:10.1108/03090560510581782
- Greenberg, M. T., Weissberg, R.P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58(6), 466-474.

- Greenberg, M. T. & Kusche, C.A. (1988). *The social problem-solving interview*.  
Unpublished manuscript, University of Washington-Seattle.
- Greenberg, M. T., & Kusche, C. A. (1993). *Promoting social and emotional development in deaf children: The PATHS Project*. Seattle: University of Washington Press.
- Greenberg, M. T., Kusche, C.A., & Riggs, N. (2004). The PATHS curriculum: Theory and research on neurocognitive development and school success. In Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J., (Eds.) *Building academic success on social and emotional learning: What does the research say?* (pp. 170-188). New York: Teachers College Press.
- Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap: Two sides of the same coin?. *Educational Researcher*, 39(1), 59-68.
- Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco, CA: Jossey-Bass.
- Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Sage.
- Hackman, D. A., Farah, M. J. & Meaney, M. J. (2010). Socioeconomic status and the brain: Mechanistic insights from human and animal research. *Neuroscience*, 11, 651-659.
- Hagenauer, G., Hascher, T., & Volet, S. E. (2014). Teacher emotions in the classroom: Associations with students' engagement, classroom discipline, and the interpersonal teacher-student relationship. *European Journal of Psychology of Education*, 30(4), 385-403.

- Hammond, Z. (2014). *Culturally responsive teaching and the brain: Promoting authentic engagement and rigor among culturally and linguistically diverse students*. Thousand Oaks, CA: Corwin.
- Hamre, B. K., & Pianta, R. C. (2001). Can instructional and emotional support in the first-grade make a difference for children at risk of school failure? *Child Development*, 76(5), 949-967.
- Hanson, R. (2013). *Hardwiring happiness: The new brain science of contentment, calm, and confidence*. New York: Harmony Books.
- Hardiman, M. (2012). *The brain-targeted teaching model: Teaching model for 21<sup>st</sup>-Century Schools*. Thousand Oaks, CA: Corwin.
- Hargreaves, A. (2000). Mixed emotions: teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16, 811-826.
- Henry, G. (1995). *Cultural diversity awareness inventory*. Hampton, VA: Hampton University Mainstreaming Outreach Project.
- Hightower, A.D., Work, W.C., Cowen, E. L., Lotyczewski, B.S., Spinell, A. P., Guare, J. C., et al. (1986). The Teacher-Child Rating Scale: A brief objective measure of elementary children's school problem behaviors and competencies. *School Psychology Review*, 15, 393-409.
- Hill, J. L., Rubin, D. B., & Thomas, N. (2000). The design of the New York School Choice Scholarship program evaluation. In L. Bickman (Ed.), *Validity and social experimentation: Donald Campbell's legacy* (Vol. 1, pp. 155-180). Thousand Oaks, CA: Sage.



- Hinton, W.W., & Iverson, I.H. (2012). *Classical conditioning and operant conditioning: A response pattern analysis*. New York, NY: Springer.
- Hoffman, D. M. (2009). Reflecting on social emotional learning: A critical perspective on trends in the United States. *Review of Educational Research*, 79(2), 533-556.
- Holstein, J. A., & Gubrium, J. F. (1994). Constructing family: Descriptive practice and domestic order. In T. R. Sarbin & J. I. Kitsuse (Eds.), *Constructing the social* (pp. 232-250). New York, NY: Sage.
- Horizon Research, Inc. (2002). *Local systemic change classroom observation protocol*. Retrieved from <http://www.horizonresearch.com/LSC/manual/0506/tab6/cop0506.pdf>
- Israelashvili, M. (1997). School adjustment, school membership, and adolescents' future expectations. *Journal of Adolescence*, 20, 525-535.
- Jennings, P.A., & Greenberg, M. T. (2008). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 20(1), 1-35.
- Jennings, P.A., Brown, J. L., Frank, J., Tanler, R., Doyle, S., Rasheed, D., DeWeese, A., Greenberg, M. T. (2014). *Promoting teachers' social and emotional competence: A replication study of the cultivating awareness and resilience in education (CARE) program*. Evanston, IL: Society for Research on Educational Effectiveness.

- Jennings, P.A. Frank, J. L., Snowberg, K. E., Coccia, M.A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly*, 28(4), 374-383.
- Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains and what schools can do about it*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Jerome, E. M., Hamre, B. K., Pianta, R. C. (2009). Teacher-child relationships from kindergarten to sixth grade: Early childhood predictors of teacher-perceived conflict and closeness. *Social Development*, 18(4), 915-945. doi:10.1111/j.1467-9507.2008.00508.x
- Johnson, C. C., & Fargo, J. D. (2010). Urban school reform enabled by transformative professional development: Impact on teacher change and student learning of science. *Urban Education*, 45, 4-29.
- Johnson, C. C., Kahle, J. B., & Fargo, J. (2007). A study of sustained, whole-school, professional development on student achievement in science. *Journal of Research in Science Teaching*, 44, 775-786.
- Johnson, D. W. & Johnson, R. (1989). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Company.
- Johnson, D. W. & Johnson, R. (1995). *Teaching students to be peacemakers* (3rd ed.). Edina, MN: Interaction Book Company.
- Johnson, D. W., Johnson, R., & Holubec, E. (1998). *Advanced cooperative learning* (3<sup>rd</sup> ed.). Edina, MN: Interaction Book Company.

- Jones, S. M. & Bouffard, S. M. (2012). Social and emotional learning in schools: From programs to strategies. *Society for Research in Child Development*, 26(4), 36-47.
- Kam, C., Greenberg, M. T., & Kusche, C. A. (2004). Sustained effects of the PATHS curriculum on the social and psychological adjustment of children in special education. *Journal of Emotional and Behavioral Disorders*, 12(2), 66-78.
- Katz, B.M., & McSweeney, M. (1980). A multivariate Kruskal-Wallis test with post hoc procedures. *Multivariate Behavioral Research*, 15, 281–297.
- Kegel, C. A. T., Bus, A. G., Ijzendoorn, H. V. (2011). Differential susceptibility in early literacy instruction through computer games: The role of the Dopamine D4 Receptor Gene (DRD4). *Mind, Brain, and Education*, 5(2), 71-78.
- Kleinfeld, J. (1972). *Effective teachers of Indian and Eskimo high school students*. Fairbanks: University of Alaska, Institute of Social, Economic, and Government Research.
- Knaflic, C. N. (2015). *Storytelling with data: A data visualization guide for business professionals*. New York: Wiley Press.
- Kuther, T. L. & Fisher, C. B. (1998). Victimization by community violence in young adolescents from a suburban city. *Journal of Early Adolescence*, 18, 53-76.
- Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32(3), 465-91.
- Ladson-Billings, G. (2002). But that's just good teaching! The case for culturally relevant pedagogy. In S. J. Denbo & L. M. Beaulieu (Eds.), *Improving schools for African American students: A reader for educational leaders* (pp. 95-102). Springfield, IL: Charles C. Thomas.

- Ladson-Billings, G. & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers College Record*, 97, 47-68.
- Landahl, J. (2013). The eye of power(-lessness): On the emergence of the panoptical and synoptical classroom, *History of Education*, 42(6), 803-821.
- Laurence, C. O., Williamson V., Sumner K. E., Fleming J. (2010). "Latte rural: The tangible and intangible factors important in the choice of a rural practice by recent GP graduates". Retrieved from <http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=1316>
- Lee, D.L. & Axelrod, S. (2005). *Behavior modifications: Basic principles*. Austin, TX: Pro-Ed.
- Lee, J., & Reeves, T. (2012). Revisiting the impact of NCLB high-stakes school accountability, capacity, and resources: State NAEP 1990-2009 reading and math achievement gaps and trends. *Educational Evaluation and Policy Analysis*, 34(2), 209-231.
- Leviton, L. C., & Lipsey, M. W. (2007). A big chapter about small theories: Theory as method: Small theories of treatments. *New Directions for Evaluation*, 2007(114), 27-62. doi:10.1002/ev.224
- Lieberman, M. (2014). *Social: Why our brains are wired to connect*. New York, NY: Broadway Books.
- Lopes, P. & Salovey, P. (2004). Toward a broader education: Social, emotional, and practical skills. In J. E. Zins, R.P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building school success on social and emotional learning*. New York, NY: Teachers College Press.

- Maring, E. F., & Koblinsky, S. A. (2013). Teachers: challenges, strategies, and support needs in schools affected by community violence: A qualitative study. *Journal of School Health*, 83(6), 379-388. doi:10.1111/josh.12041
- McLaughlin, J., & Jordan, G. (2010). Using logic models. In J. Wholey, H. Hatry, & K. Newcomer (Eds.), *Handbook of practical program evaluation* (pp. 55-80). San Francisco: Jossey-Bass.
- Malecki, C. K., & Elliott, S. N. (2002). *Children's social behaviors as predictors of academic achievement: A longitudinal analysis. School Psychology Quarterly*, 17(1), 1-23.
- Malu, K. F. (2015). *Observation tools for professional development*. English Teaching Forum, 53(1), 14-24.
- Maslach, C., Jackson, S. E., & Schwab, R. L. (1996). Maslach burnout inventory-Educator survey (MBI-ES). In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *MBI Manual*. (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Mayer, J. D. & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence Implications for educators* (pp. 3-31). New York: Basic Books.
- Mayer, J. D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards of intelligence. *Intelligence*, 27, 267-298.

- McCombs, B.L. (1993). Learner-centered psychological principles for enhancing education: Applications in school settings. In L.A. Penner, G. M. Batsche, H. M. Knoff, & D. L. Nelson (Eds.). *The challenges in mathematics and science education: Psychology's response* (pp. 287-313). Washington, DC: American Psychological Association.
- McKown, C., Gumbiner, L., Russo, N., Lipton, M. (2009). Social-emotional learning skill, self-regulation, and social competence in typically developing and clinic-referred children. *Journal for Clinical Child & Adolescent Psychology*, 38(6), 858–871.
- McMahon, S. D., Felix, E. D., & Nagarajan, T. (2011). Social support and neighborhood stressors among African American youth: Networks and relations to self-worth. *Journal of Child and Family Studies*, 20(3), 255-262.
- Mehan, H., Hubbard, L., Villanueva, I., & Lintz, A. (1996). *Constructing school success: The consequences of untracking low-achieving students*. New York: Cambridge University Press.
- Meier, D. (2001). *Is standardized testing good for education?* Boston, MA: Beacon Press.
- Merrell, K. W., & Gueldner, B. A. (2010). *Social and emotional learning in the classroom: Promoting mental health and academic success*. New York, NY: The Guilford Press.
- Moore, R. (2004). Cultural capital: Objective probability and the cultural arbitrary, *British Journal of Sociology of Education*, 25(4), 445-456.

- Morris, E. (2009). Researching race: Identifying a social construction through qualitative methods and interactionist perspective, *Symbolic Interaction*, 30(3), 409-425.  
Retrieved from <http://www.jstor.org/stable/10.1525/si.2007.30.3.409>
- Mowat, J. (2011). The development of intrapersonal intelligence in pupils experiencing social, emotional and behavioral difficulties. *Educational Psychology in Practice*, 27(3), 227-253.
- Mundy, M., Howe, M. E., and Kupczynski, L. (2015). Teachers' perceived values on the effect of literacy strategy professional development. *Teacher Development*, 19(1), 116-131. doi:10.1080/1366430.2014.986335
- Murray, D.W., Rabiner, D., & Carrig, M. (2014). *Grade level effects of the Incredible Years Teacher Training Program on emotion regulation and attention*. Paper presented at the 2014 meeting of the Society for Research on Educational Effectiveness (SREE). Washington, DC.
- Nasir, N. S., & Hand, V. M. (2006). Exploring sociocultural perspectives on race, cultural, and learning. *Review of Educational Research*, 76(4), 449-475.
- Navarro, R., Flores, L., & Worthington, R. (2007). Mexican American middle school students' goal intentions in mathematics and science: A test of social cognitive career theory. *Journal of Counseling Psychology*, 54(3), 320-335.
- Newberry, M., Gallant, A., & Riley, P. (Eds.) (2013). *Emotion and school: Understanding how the hidden curriculum influences relationships, leadership, teaching, and learning*. London: Emerald.

- Nieto, S. (2013). Language, literacy, and culture: Aha! moments in personal and sociopolitical understanding. *Journal of Language and Literacy Education*, 9(1), 8-20.
- Noble, K.G., Norman, M.F., & Farah, M.J. (2005). Neurocognitive correlates of socioeconomic status in kindergarten children. *Development Science*, 8(1), 74-87.
- Noguera, P. A. (2003). Schools, prisons, and social implications of punishment: Rethinking disciplinary practices. *Theory Into Practice*, 42(4), 341-350.
- Ogbu, J. U. & Davis, A. (2003). *Black American students in an affluent suburb: A study of academic disengagement*. Mahway, NJ: Lawrence Erlbaum Associates.
- Ogbu, J. U., & Simons, H. D. (1998). Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology & Education Quarterly*, 29(2), 155-88.
- Oettingen, G. (1995). Cross-cultural perspectives on self-efficacy. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 149-176). Cambridge, UK: Cambridge University Press.
- Payne, W. (1975). *Study of emotion: Developing emotional intelligence* (Doctoral dissertation, The Union for Experimenting Colleges and Universities). Retrieved from <http://eqi.org/payne.htm#July 2011>
- Phelps, E. A. (2006). Emotion and cognition: Insights from studies of the human amygdala. *Annual Review of Psychology*, 57, 27-53.
- Phelps, E. A., & LeDoux, J. E. (2005). Contributions of the amygdala to emotion processing: From animal models to human behavior. *Neuron*, 48(2), 175-187.



- Piaget, J. (1973). *To understand is to invent: The future of education* (G.A. Roberts, Trans.). New York: Viking Press.
- Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. Washington, DC: American Psychological Association.
- Pianta, R. C., La Paro, K. M., Payne, C., Cox, M. J., & Bradley, R. (2002). The relation of kindergarten classroom environment to teacher, family, and school characteristics and child outcomes. *The Elementary School Journal*, 102, 225–240.
- Pintrich, P. R. & De Groot, E. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82, 33-40.
- Pintrich, P. R., Smith, D.A.F., Garcia, T., & McKeachie, W. J. (1991). *Manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ)*. Ann Arbor, MI: National Center for Research to Improve Postsecondary Teaching and Learning. Retrieved from <http://files.eric.ed.gov/fulltext/ED338122.pdf>
- Purdie, N., Hattie, J., & Douglas, G. (1996). Students' conceptions of learning and their use of self-regulated learning strategies: A cross-cultural comparison. *Journal of Educational Psychology*, 88, 87-100.
- Queensberry, A., & Doubet, S. (2006). A framework for professional development focused on social and emotional competencies. *YC Young Children*, 61(6), 30-32.

- Ransford, C. R., Greenberg, M. T., Domitrovich, C. E., Small, M., & Jacobson, L. (2009). The Role of teachers' psychological experiences and perceptions of curriculum supports on the implementation of a social and emotional learning curriculum. *School Psychology Review*, 38(4), 510-532.
- Ravitch, D. (2011). The death and life of the great American school system: How testing and choice are undermining education. New York, NY: Basic Books.
- Reyes, J. A. & Elias, M. J. (2011). Fostering social-emotional resilience among Latino youth. *Psychology in the Schools*, 48(7), 723-737. doi:10.1002/pits.20580
- Richardson, T. A. (2012). Disrupting the coloniality of being: Toward de-colonial ontologies in philosophy of education. *Studies in Philosophy and Education*, 31(6), 539-551.
- Rilling, J. K., Gutman, D. A., Zeh, T. R., Pagnoni, G., Berns, G. S., & Kilts, C. D. (2002). A neural basis for social cooperation. *Neuron*, 35(2), 395-405.
- Rosenfeld, G. (1971). *Shut those thick lips: A study of slum school failure*. Prospect Heights, IL: Waveland Press.
- Ross, D. D., Bondy, E., Gallingane, C., & Hambacher, E. (2008). Promoting academic engagement through insistence: Being a warm demander. *Childhood Education*, 84(3), 142-146.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach*. Thousand Oaks, CA: Sage.

- Rubin, M.M. (1999). *Emotional intelligence and its role in mitigating aggression: A correlational study of the relationship between emotional intelligence and aggression in urban adolescents*. Unpublished dissertation, Immaculata College, Immaculata, PA.
- Saderholm, J., Ronau, R. N., Rakes, C. R., Bush, S. S., & Mohr-Schroeder, M. (2016). The critical role of a well-articulated conceptual framework to guide professional development: An evaluation of a state-wide two-week program for mathematics and science teachers. *Professional Development in Education*, 43(5), 789-818. doi:10.1080/19415257.2016.1251485.
- Salkind, N.J. (2008). *Statistics for people who (think they) hate statistics*. Los Angeles, CA: Sage Press.
- Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.
- Salovey, P., Mayer, J. D., & Caruso, D. R. (2002). The positive psychology of emotional intelligence. In C. R. Snyder & S. J. Lopez (Eds.), *The handbook of positive psychology* (pp. 159-171). New York: Oxford University Press.
- Shadish, W., Cook, T., & Campbell, D. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome Expectancy beliefs. *Teaching and Teacher Education: An International Journal of Research and Studies*, 23(7), 1086-1101.
- Skinner, B. F. (1938). *The behavior of organisms*. New York, NY: D. Appleton & Company.

- Sompong, S., Erawan, P., and Dharm-tad-sa-na-non, S. (2015). The development of professional learning community in primary schools. *Educational Research and Reviews*, 10(21), 2789-2796. doi:10.5897/ERR2015.2342
- Soriano, F. I. (2013). *Conducting needs assessments: A multidisciplinary approach* (2nd ed.). Los Angeles, CA: Sage Publications.
- Schunk, D. H. (1987). Peer models and children's behavioral change. *Review of Educational Research*, 57, 149-174.
- Schunk, D. H. (1989). Self-efficacy and skill development: Influence of task strategies and attributions. *Journal of Educational Research*, 79, 238-244.
- Shade, B. J., Kelly, C., & Oberg, M. (1997). *Creating culturally responsive classrooms*. Washington, DC: American Psychological Association.
- Sparks, S. K. & Many, T. W. (2015). *How to cultivate collaboration in a PLC*. Bloomington, IN: Solution Tree Press.
- Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology*, 35, 4-28.
- Spindler, G. D. (1967). Why have minority groups in North America been disadvantaged by their schools? In G. D. Spindler (Ed.), *Education and cultural process: Anthropological approaches* (pp. 160-172). Prospect Heights, IL: Waveland Press.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52(6), 613-29.

- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797-811.
- Stevens, T., Olivarez, A., & Hamman, D. (2006). The role of cognition, motivation, and emotion in explaining the mathematics achievement gap between Hispanic and white students. *Hispanic Journal of Behavioral Sciences*, 28(2), 161.
- Storti, C. (2001). *The art of crossing cultures*. New York: Intercultural Press.
- Sztajn, P. (2011). Standards for reporting mathematics professional development in research studies. *Journal for Research in Mathematics Education*, 42(3), 220-236.
- Taylor, S.E. & Brown, Y. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- [Teaching Tolerance]. (2008, April 9). *Democratic classrooms* [Video File]. Retrieved from <https://youtu.be/oGo39Wdm3J4>
- Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.). *Handbook of Mixed Methods in Social and Behavioral Research* (pp. 3-50). Thousand Oaks, CA: Sage.
- Tobin, K, Ritchie, S. M., Oakley, J. L., Mergard, V., & Hudson, P. (2013). Relationships between emotional climate and the fluency of classroom interactions. *Learning Environments Research*, 16(1), 71-89.
- U.S. Department of Education, National Center for Education Statistics. (2016). *Digest of Education Statistics, 2014*.

- Valois, R. F. & Zullig, K. J. (2013). Psychometrics of a brief measure of emotional self-efficacy among adolescents from the United States. *Journal of School Health*, 83(10), 704-711.
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Walker-Dalhouse, D, & Dalhouse. A. D. (2006). Investigating white preservice teachers' beliefs about teaching in culturally diverse classrooms. *The Negro Educational Review*, 58(1-2), 69-79.
- Ware, F. (2006). Warm demander pedagogy: Culturally responsive teaching that supports a culture of achievement for African American students. *Urban Education*, 41(4), 427-456. doi:10.1177/0042685906289710
- Webb, L., Carey, J., Villares, E., Wells, C., & Sayer, A. (2014). *Results of a randomized controlled trial of student success skills*. Evanston, IL: Society for Research on Educational Effectiveness.
- Webb, M.L. & Neuharth-Pritchett, S. (2011). Examining factorial validity and measurement invariance of the student-teacher relationships scale. *Early Childhood Research Quarterly*, 26, 205-215. Doi:10.1016/j.ecresq.2010.09.004
- Webster-Stratton, C., Reid, M. J., & Hammond, M. (2001). Preventing conduct problems, promoting social competence: a parent and teacher training partnership in head start. *Journal of Clinical Child Psychology*, 30(3), 283-302.

- Webster-Stratton, C., Reid, J., & Stoolmiller, M. (2008). Preventing conduct problems and improving school readiness: Evaluation of the Incredible Years teacher and child training programs in high-risk schools. *Journal of Child Psychology and Psychiatry*, 49(5), 471-88.
- Weissberg, R. P., Resnik, H., Payton, J., & O'Brien, M. (2003). Evaluating social and emotional learning programs. *Educational Leadership*, 60(6), 46-50.
- Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology*, 90, 202-209.
- Williams, T. & Williams, K. (2010). Self-efficacy and performance in mathematics: Reciprocal determinism in 33 nations. *Journal of Educational Psychology*, 102(2), 453-466.
- Yurdugul, H. (2008). Minimum sample size for Cronbach's coefficient alpha: A Monte-Carlo study. *Hacettepe University Journal of Education*, 35, 397-405.
- Zeleny, J. (2010, March 1). Obama backs rewarding districts that police failing schools. *New York Times*, p. 6.
- Zins, J.E., Elias, M.J., Greenberg, M.T., & Weissberg, R.P. (2000). Promoting social and emotional competence in children. In K.M. Minke & G.C. Bear (Eds.), *Preventing school problems-promoting school success: Strategies and programs that work* (pp. 71-100). Bethesda, MD: National Association of School Psychologists.
- Zins, J., Payton, J. W., Weissberg, R. P., & O'Brien, M. (2007). Social and emotional learning and successful school performance. In G. Mathews, M. Zeidner, & R. D. Roberts (Eds.), *Emotional intelligence: Knowns and unknowns* (pp. 376-395). New York: Oxford University Press.

## Appendix A

### Needs Assessment Survey Instrument

#### Section 1: Demographic Questions

	Classroom Teacher	Counselor	Instructional Assistant	Administrator	Other
1. What is your role as an educator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Public School	Private School	Charter School	Alternative or Other Type of School	District Offices
2. At what type of school do you currently work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Elementary School	Middle School	High School	Alternative School	District Offices	Other
3. At what level of school do you currently work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	21-30	31-40	41+54	55+
4. What is your age range?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	0-1	2-5	6-10	11-19	20 or more years
5. How many years have you been working in education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Female	Male	Other	Prefer Not to Say
6. What is your gender?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Asian American	Black or African American	Hispanic	Multiracial	White	Prefer Not to Say
6. What is your race or ethnicity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Section 2- Survey Questions

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Students' social and emotional well-being is impactful to students' achievement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. My school or school system currently puts an emphasis on developing educators' and/or students' social-emotional competencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Lack of motivation, efficacy, and distracting behaviors can be defined as social and emotional issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Community stressors such as poverty, community violence, or abuse lower students' social and emotional well-being and impact academic performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. A student's socio-economic status, ethnicity, or culture can be a factor(s) in a student's academic performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. A lack of positive relationships, a sense of trust, and/or disengagement from school culture are factors in student academic performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. When a student's home life or culture differs from an educator's or school's culture, this can affect a student's ability or desire to learn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Appendix B

### Intervention Timeline

Event	Descriptions	Timeframe	Participants	Measures
Initial PD Plan Meeting	Initial meeting with the program facilitators to review intervention plan, timeline, and initial materials.	July-August 2016	Researcher Program Facilitators	None
Pre-implementation Meeting	Pre-implementation meeting between researcher and facilitators for final review of materials and ensure implementation fidelity.	September 2016	Researcher Program Facilitators	None
Initial Baseline Data	Gathering of initial survey data for experimental and control groups.	October 2016	Researcher Teacher Participants	[QUAN] Pre-test survey data
Qualitative Observations #1	First observation to gather observable qualitative classroom data.	October 2016	Neutral Observer Teacher Participants	[QUAL] Data collected using the Positive Relationship Matrix and coded by researcher.
PD Session #1	Introduction to EI/Sec/SEL	November 2016	Program Facilitators Teacher Participants	[QUAL] Social-emotional challenges capture sheet and exit card
PD Session #2	SEC Strategies: Baselines and Reactive Supports	November 2016	Program Facilitators Teacher Participants	[QUAL] Emotional baseline capture sheet and journal entry
PD Session #3	SEC Strategies: Content	December 2016	Program Facilitators Teacher Participants	[QUAL] Journal entry
PD Session #4	CRT introduction	December 2016	Program Facilitators Teacher Participants	[QUAL] Cultural identity map
PD Session #5	CRT: Content and instruction	January 2017	Program Facilitators Teacher Participants	[QUAL] CRT focus lesson and journal entry

Event	Descriptions	Timeframe	Participants	Measures
PD Session #6	Student efficacy and emotional resilience	February 2017	Program Facilitators Teacher Participants	[QUAL] Scenario response capture sheet and journal entry
PD Session #7	Relationships	February 2017	Program Facilitators Teacher Participants	[QUAL] Relationship challenges capture sheet and journal entry
PD Session #8	WDP: Overview and Structures	March 2017	Program Facilitators Teacher Participants	[QUAL] WDP exit card and journal entry
PD Session #9	WDP: Democratic Firmness	March 2017	Program Facilitators Teacher Participants	[QUAL] Video capture sheet and journal entry
PD Session #10	WDP: Scenarios and Best Practices	April 2017	Program Facilitators Teacher Participants	[QUAL] WDP scenario capture sheet and discussion card
Collection of Post-test Survey Data	Gathering of second set of survey data for experimental and control groups.	April 2017	Researcher Teacher Participants	[QUAN] Post-test survey data
Student Interviews	Interviews with teacher selected students	April 2015	Third party interviewer Students	[QUAL] Interview data coded by researcher
Qualitative Obs. #2	Second observation to gather observable qualitative classroom data.	May 2017	Neutral Observer Teacher Participants	[QUAL] Data collected using the Positive Relationship Matrix and coded by researcher.
Final Researcher and Program Facilitators Meeting	A final meeting between researcher and program facilitators to compare qualitative observational notes and coding.	May 2017	Researcher Program Facilitators	None

## Appendix C

### Teacher Outcome Evaluation Survey

*Directions: Thank you for participating in this survey. The survey should take approximately 10-15 minutes to complete. Please answer the questions to the best of your ability. If you are unfamiliar with terminology or a concept in the survey, you may indicate it either in the text box or by clicking "Neutral" in scale questions. Your answers will be confidential and anonymous.*

#### Section 1: Demographic Questions

	21-25	26-35	36-45	46-59	60+	Prefer Not to Say
1. Indicate your age range:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Female	Male	Other	Prefer Not to Say
2. Indicate your gender:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Asian American	Black/ African American	Hispanic/Latino	Multi-racial	Pacific Islander	White	Prefer Not to Say
3. Indicate your race:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1-3	4-9	10-24	25+
4. Indicate your years taught:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Section 2- Survey Questions

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I believe warm and supportive relationships are important between students and teachers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. When students are upset, teachers can offer comfort or support.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Students value relationships with teachers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. When students are able to share emotions or concerns with a teacher, students benefit socially and/or academically.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Students with positive relationships with teachers are more likely to take academic chances.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
6. Positive relationships help teachers deal with negative classroom behaviors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Positive relationships with teachers helps students feel effective and confident.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Positive relationships between teachers and students helps bring teachers and students of different races, cultures, or backgrounds to have more empathy and understanding of each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Positive relationships between teachers and students helps reduce unpredictable behaviors or incidents.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Positive relationships between teachers and students are constantly developing and can be improved throughout the year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Class work, assignments, and tests can cause anxiety and emotional concerns for students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. When work is challenging or hard, students often give up.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. When work is challenging or hard, students seek emotional support from teachers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. When a student does not understand material, positive emotional support from teachers helps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Difficult assignments or class materials can cause anger and negative emotions in students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. When students like or relate to materials, they do better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. When students expect to do better on assignments, they do better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
18. When students do poorly on assignments, asking the teacher about mistakes results in better performance about the next assignment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Differences in race or culture challenge students' belief in success.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Students of different race or cultures require different or adapted supports to perform better on assignments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. A students' social-emotional wellbeing is important to academic success.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Happiness, openness, and positive emotions in the classroom can relate to positive academic outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Stress, anxiety, and negative emotions can relate to negative academic outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. A student's ability to deal with negative emotions can impact academic outcomes either positives or negatively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. When faced with negative social or emotional situations, teacher supports of students can negate these situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Teachers can serve as social and emotional supports for students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Students with social and emotional supports can solve conflicts, understand context, and critically think at improved levels.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
28. Social and emotional wellbeing and the ability to adapt to negative social and emotional situations increases students' confidence, organization, and cooperation with the learning process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Social and emotional wellbeing impacts negative effects of students' home life, social life, and/or community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Social and emotional wellbeing impacts negative effects of differences in students' race, ethnicity, and/or culture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Appendix D

### Positive Relationship Matrix – Qualitative Observational Instrument

<b>Building Positive Relationships</b>				
<i>Skills and Indicators</i>	<i>Consistent</i>	<i>Occasionally</i>	<i>Seldom</i>	<i>Observations/Evidence</i>
Greets students on arrival and by name				
Communicates with students at eye level				
Verbally interacts with individual students during routines and activities				
Shows respect, consideration, and active listen to all students				
Uses a variety of strategies for building relationships with students				
<b>Building Student Efficacy</b>				
<i>Skills and Indicators</i>	<i>Consistent</i>	<i>Occasionally</i>	<i>Seldom</i>	<i>Observations/Evidence</i>
Provides supportive comments to all students				
Provides opportunities for reflection or comments on assessment performance				
Reacts to incorrect answers with explanation or revision				
Provides opportunities for self-correction or peer correction				



**Appendix E**  
**Session Observational Instrument**

**IRR Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**PLC Session Observed:** \_\_\_\_\_

<b>Y/N</b>	<b>Question</b>	<b>Comments/Observations</b>
	Where the session objectives communicated verbally and visually?	
	Did the materials covered and communicated align with the session objectives?	
	Did session participants actively engage in materials through questioning and discussion?	
	Was an activity or application applied to the session?	
	Did session participants actively engage in the activity or application during the session?	
	Through participation in the activity or application, did session participants demonstrate understanding of the session objectives?	
	Did the session facilitator review next session agenda and details?	

## **Appendix F**

### **Student Interview Questions**

1. Describe how your English teacher has built a relationship with you this school year.
2. How do you know your English teacher cares about you and wants you to be successful?
3. When you are feeling frustrated or that you cannot finish a task, how has your English teacher helped encourage you to do the task?
4. Has your English teacher given you the opportunity to make mistakes, reflect, and return to the assignment? If so, how did they help you get to where you needed to be? If not, what should they have done?
5. If you are feeling stressed, anxious, or something bad has happened outside of class, has your English teacher recognized that you need help? If so, how did they help you? If not, why do you think they did not help?
6. Has your English teacher explicitly discussed emotions and how to cope with bad emotions or feelings at any point in the year? If so, how did he or she do it?
7. Has your English teacher explicitly discussed topics of race, culture, and ethnicity at any point in the year? If so, how did he or she do it?
8. How would you describe your English teacher's sensitivity or knowledge of your race or culture?
9. Do you feel comfortable talking about issues of race and culture with your English teacher? Why or why not?
10. With the year almost over, how would you describe your relationship with your English teacher?

## Appendix G

### Adult Consent Form

Approved October 11, 2016 Protocol Number: HIRB000046

Adult Consent Form – Revised 9/2/16

Johns Hopkins University  
Homewood Institutional Review Board (HIRB)

#### Informed Consent Form

**Title:** An Investigation of a Social-Emotional Competency and Culturally-Responsive Teaching Professional Development: Examining Changes in Relationships, Efficacy, and Resilience (Adult Consent Form)

**Principal Investigator(s):** Dr. Ranjini JohnBull, School of Education  
Jonathan Garrick, School of Education

**Date:** October, 2016

#### PURPOSE OF RESEARCH STUDY:

The purpose of this research study is to examine the impact of professional development training for teachers focusing on social emotional competencies (SEC) and culturally responsive teaching strategies and teacher's perceptions and implementation of strategies relating to positive teacher-student relationships, student efficacy, and student emotional resilience.

#### PROCEDURES:

Adult participants will be asked to complete or participate in the following:

- A consent form questionnaire (this document)
- An electronic Google Forms survey twice: before and after participation in the professional development sessions
- Two classroom observations by a neutral third party observer: before and after participation in the professional development sessions
- Ten professional development sessions embedded within the teachers' professional learning community
- Program deliverables such as exit cards, capture sheets, journal entries, and sample lesson plans within the context of the professional development sessions
- Identification of one student within the teacher's classroom to serve as a case study for program activities. At the end of the study, a neutral third party interviewer will interview this student
- A neutral third party will videotape two professional development sessions for later analysis by the researcher
- Participation in voluntary coaching and observations with a peer also participating in the professional development sessions
- A post-professional development interview completed by a neutral third party.

**Adult Consent Form – Revised 9/2/16**

**Time required:** The consent form should take participants approximately 5-10 minutes to review and complete. The pre- and post-test surveys will be completed online and should take participants 20-30 minutes each to complete. Professional development sessions will be embedded in the teachers' workday and will be approximately 50 minutes per session. Classroom observations will be embedded in the teachers' classroom day and will last approximately 30 minutes per observation (approximately 60 total minutes). Teacher interviews will take approximately 10-15 minutes. Voluntary observations and coaching times are at the discretion of the participant. Note that individual response times may vary

**RISKS/DISCOMFORTS:**

There are no anticipated risks or discomforts to participants.

**BENEFITS:**

Potential benefits are an increased understanding on how educators can use social-emotional competency and culturally responsive teaching strategies to increase the academic performance of students.

**VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:**

Participation in this study is entirely voluntary. Participants may elect to not participate in this study by not completing the consent questionnaires or indicating non-consent. If a participant elects not to participate in this study, there are no penalties and there will be no loss of benefits to which the participant would otherwise be entitled. If the participant elects to withdraw, they may either not submit the consent questionnaire or contact Jonathan Garrick via phone or e-mail: (301) 610-8000, JGarrick3@jhu.edu

**CIRCUMSTANCES THAT COULD LEAD US TO END YOUR PARTICIPATION:**

Staff members going on long term leave which will require missing more than 2 professional development sessions will be asked to end participation in data collection for this study.

**CONFIDENTIALITY:**

Any study records that identify you will be kept confidential to the extent possible by law. People responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections, may review the records from your participation. All of these people are required to keep your identity confidential. Otherwise, records that identify you will be available only to people working on the study unless you give permission for other people to see the records.

The researcher and research affiliates (including those entities described above) above will examine all questionnaires and measures. No identifiable information will be included in any reports of the research published or provided to school administration. This includes surveys, observations, deliverable materials, and interviews. Demographic data including race, age, and years of experience will be asked and reported only in group means and participants will always have an option to not answer demographic questions.

All research data including questionnaires will be kept in a locked office and electronic data will be stored on the researcher's computer which is password protected. Any original paper documents will be shredded once the whole study is completed.

Adult Consent Form – Revised 9/2/16

**COSTS/COMPENSATION**

There are no costs or compensation to participants in this study.

**IF YOU HAVE QUESTIONS OR CONCERNS:**

Participants can ask questions about this research study at any time during the study by contacting Jonathan L. Garrick via phone or e-mail: (301) 610-8000, JGarrick3@jhu.edu

If participants have questions about their rights as a research participant or feel they have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

**SIGNATURES**

**WHAT YOUR SIGNATURE MEANS:**

Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study.

By signing this consent form, you have not waived any legal rights you otherwise would have as a participant in a research study.

---

Participant's Signature

Date

---

Signature of Person Obtaining Consent

Date

## Appendix H

### Parent Consent Form

Approved October 11, 2016 Protocol Number: HIRB00004658

Parent Consent Form – Revised 9/2/16

Johns Hopkins University  
Homewood Institutional Review Board (HIRB)

Parental Permission Form	
Title:	An Investigation of a Social-Emotional Competency and Culturally-Responsive Teaching Professional Development: Examining Changes in Relationships, Efficacy, and Resilience (Parent Consent Form)
Principal Investigator:	Dr. Ranjini JohnBull, School of Education Jonathan Garrick, School of Education
Date:	October 2016

#### PURPOSE OF RESEARCH STUDY:

The purpose of this research study is to examine the impact of professional development training for teachers focusing on social emotional competencies (SEC) and culturally responsive teaching (CRT) strategies and how teacher put these strategies in place in the classroom. Your child was selected by one of his or her English teachers to serve as a case study during his or her participation in the professional development program. We anticipate that approximately 10-11 other students will be selected in addition to your child.

#### PROCEDURES:

There will be three components for this study in regards to student participants:

1. All parents of student participants will be asked to complete a consent form (this document).
2. All students will complete a consent/assent form explaining the research.
3. At the completion of the research in April 2017, a neutral third party interviewer will interview your child. The interviewer will ask your child about his or her relationship with your child's English teacher, how your child's English teacher encourages him or her, and how your child's English teacher supports him or her. All interview answers will be anonymous and no other than the researcher will have access to your child's answers (including your child's teacher).

Time required: The consent form should take participants approximately 5-10 minutes to review and complete. The student interviews will take 10-15 minutes. Note that individual response times may vary.

#### RISKS/DISCOMFORTS:

There are no anticipated risks to participants.



Parent Consent Form – Revised 9/2/16

**BENEFITS:**

A student participant may benefit from having the chance to articulate his or her opinions on positive student-teacher relationships and teacher support that will help other students and teachers.

**VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:**

Your child's participation in this study is entirely voluntary. You choose whether to allow your child to participate and we will also ask your child whether he or she agrees to take part in the study. If you decide not to allow your child to participate, or your child chooses not to participate, there are no penalties, and neither you nor your child will lose any benefits to which you would otherwise be entitled.

If you or your child chooses to participate in the study, you or your child can stop participation at any time, without any penalty or loss of benefits. If you want to withdraw your child from the study or your child wants to stop participating, please contact Jonathan L. Garrick via phone or e-mail: (301) 610-8000, JGarrick3@jhu.edu

If we learn any new information during the study that could affect whether you or your child want to continue participating, we will discuss this information with you and your child.

**CIRCUMSTANCES THAT COULD LEAD US TO END YOUR PARTICIPATION:**

Under certain circumstances, we may decide to end your child's participation before he or she has completed the study. Specifically, we may stop your child's participation if he or she misses 20% or more of class during the study timeframe. You will be contacted if this occurs.

**CONFIDENTIALITY:**

Any study records that identify you or your child will be kept confidential to the extent possible by law. The records from your child's participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. All of these people are required to keep your identity and the identity of your child confidential. Otherwise, records that identify you or your child will be available only to people working on the study, unless you give permission for other people to see the records.

A third party assisting with data analysis of may analyze data collected during this study this study. These third party assistants will receive these data in group format and will not have access to individual student responses or names.

All materials will be examined by the researcher and research affiliates only (including those entities described above). No identifiable information will be included in any reports of the research published or provided to school administration. A participant number will be assigned to all questionnaires.

All research data including student interview responses will be kept in a locked file cabinet in a locked office. Any original paper documents will be shredded once the whole study is completed.

Only group data will be included in publication; no individual responses will ever be published.

Parent Consent Form – Revised 9/2/16

**COSTS/COMPENSATION**

There are no costs or compensation to participants in this study.

**IF YOU HAVE QUESTIONS OR CONCERNS:**

Participants can ask questions about this research study at any time during the study by contacting Jonathan L. Garrick via phone or e-mail: (301) 610-8000, JGarrick3@jhu.edu

If participants have questions about their rights as a research participant or feel they have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

**SIGNATURES**

**WHAT YOUR SIGNATURE MEANS:**

Your signature below means that you understand the information in this consent form. Your signature also means that you agree to allow your child to participate in the study. Your child's signature indicates that he or she agrees to participate in the study.

By signing this consent form, you and your child have not waived any legal rights your child otherwise would have as a participant in a research study.

\_\_\_\_\_  
Child's Name

\_\_\_\_\_  
Child's Signature (if applicable) Date

\_\_\_\_\_  
Signature of Parent or Legal Guardian Date

\_\_\_\_\_  
Signature of Person Obtaining Consent Date  
(Investigator or HIRB-Approved Designee)

\_\_\_\_\_  
Witness to Consent Procedures (if required by HIRB) Date

## Appendix I

### Student Assent Form

Approved October 11, 2016 Protocol Number: HIRB00004658

#### Student Assent Form

Johns Hopkins University  
Homewood Institutional Review Board (HIRB)

<b><i>Assent Form</i></b>	
<b>Title:</b>	An Investigation of a Social-Emotional Competency and Culturally-Responsive Teaching Professional Development: Examining Changes in Relationships, Efficacy, and Resilience (Student Assent Form)
<b>Principal Investigator:</b>	Jonathan Garrick, School of Education
<b>Date:</b>	October, 2016

An Investigation of a Social-Emotional Competency and Culturally-Responsive Teaching Professional Development: Examining Changes in Relationships, Efficacy, and Resilience

We want to tell you about a research study we are doing. A research study is a way to learn more about something. We would like to find out more about how your teachers support you in terms of how you feel about your school work, how stressful situations outside of class impact your school work, and how we can help with that. You were chosen by your English teacher to participate in this research study.

If you agree to join this study, you will be asked to participate in an interview in early April about how your English teacher supports you to complete your work, how they help you with stressful situations, and how your English teacher builds a relationship with you.

We do not believe there will be any risks to you while participating in this study.

You do not have to join this study. It is up to you. You can say okay now and change your mind later. All you have to do is tell us you want to stop. No one will be mad at you if you do not want to be in the study or if you join the study and change your mind later and stop.

Before you say yes or no to being in this study, we will answer any questions you have. If you join the study, you can ask questions at any time. Just ask the person giving you this form if you have a question. If they are not able to answer your question, they will find out and get back to you. You can wait until you get your answer to sign this form.

If you want to be in this study, please sign your name. You will get a copy of this form to keep.

\_\_\_\_\_  
Sign your name here

\_\_\_\_\_  
Date

## **CURRICULUM VITAE**

Jonathan Logan Garrick  
Jgarric3@jhu.edu | Baltimore, Maryland

### **EDUCATION**

#### **Ed.D. Entrepreneurial Leadership in Education**

**Expected 2018**

Johns Hopkins University, Baltimore, MD

Dissertation: *An Investigation of a Social-Emotional Competency and Culturally Responsive Teaching Professional Development: Examining Changes in Relationships, Efficacy, and Resilience*

#### **Administration and Leadership Certification**

**2010**

University of Maryland, College Park, MD

#### **M.A.T. Secondary English Education**

**2004**

University of South Carolina, Columbia, SC

#### **B.A. English**

**2001**

University of South Carolina, Columbia, SC

### **PROFESSIONAL LICENSURE**

Maryland State Department of Education Certifications:

Administrator II – Received 2012

Administrator I – Received 2010

Secondary English – Received 2007

### **EDUCATION EMPLOYMENT EXPERIENCE**

#### **Montgomery County Public Schools (Richard Montgomery High School)**

##### **Principal Apprentice (2017-2018)**

Under the leadership of the principal and high school performance director, led whole school instructional and managerial program at intervals in preparation for a position the secondary principal. Led whole school initiatives including evidence of learning data frameworks, student learning objectives, growth mindset and cultural proficiency professional development learning progression, and led course scheduler in addition to the standard duties of an assistant principal.

**Montgomery County Public Schools (Richard Montgomery High School)  
Assistant Principal (2011-present)**

Under the leadership of the principal, facilitated whole school instructional and managerial programming including staff evaluation, teaching and learning development, data analysis, human resources, school scheduling, test administration, student intervention, student discipline, and community engagement.

**Montgomery County Public Schools (Albert Einstein High School)  
English Resource Teacher (2009-2011)**

Served as the department chair for the English department with duties including teacher and staff observation, curriculum resource, data analysis, test administration, student-parent concerns and engagement, student intervention, and standard classroom teaching duties. Course taught included English 11, English 12, Honors English 11, Honors English 12, International Baccalaureate English 1, International Baccalaureate English 2, International Baccalaureate Theory of Knowledge, and International Baccalaureate Extended Essay.

**Montgomery County Public Schools (Albert Einstein High School)  
English Teacher (2007-2009)**

Standard teaching duties including lesson preparation, student interventions, student data analysis, peer collaboration, and parent and community outreach. Course taught included Reading Development and Intervention, English 10, Honors English 10, English 11, Honors English 11, English 12, Honors English 12, International Baccalaureate English 1, and International Baccalaureate English 2.

**District of Columbia Public Schools (Woodrow Wilson Senior High School)  
English Teacher (2004-2007)**

Standard teaching duties including lesson preparation, student interventions, student data analysis, peer collaboration, and parent and community outreach. Course taught included English 10, English 12, Advanced Placement English Language and Composition, Advanced Placement English Literature and Composition, Humanities Survey, and Creative Writing.